

*Final*

Volume 6: Other Areas —  
WBS 1.2, 1.5, 1.6,  
& 1.7.8

Battelle Columbus Laboratories  
Decommissioning Project

Baseline, Revision 3

June 28, 2002

## **Volume 6—Other Areas—WBS 1.2 , 1.5, 1.6, and 1.7.8**

- A. Outline of Volume
- B. Cost by Year (separate volume)
- C. Schedule
- D. Pricing Sheets (separate volume)  
& Data Templates

## BCLDP Baseline: Activity ID / Work Package Matrix

Open Plan ID	Work Package Number	Description
<b>Other Areas</b>		
222A03	222-B03	Regulatory Compliance
222B04	222-B04	Regulatory Compliance
222B05	222-B05	Regulatory Compliance
222B06	222-B06	Regulatory Compliance
23-03	23-B03	Institutional Relations
23-04	23-B04	Institutional Relations
23-05	23-B05	Institutional Relations
23-06	23-B06	Institutional Relations
24-03	24-B03	Environmental Safety and Health Oversight
24-04	24-B04	Environmental Safety and Health Oversight
24-05	24-B05	Environmental Safety and Health Oversight
24-06	24-B06	Environmental Safety and Health Oversight
511A03	511-B03	JN-1 Office & Shop Surveillance & Maintenance Planning and Development
511B03	511-B03	JN-1 Original Building Surveillance & Maintenance Planning and Development
511C03	511-B03	JN-1 High Bay Surveillance & Maintenance Planning and Development
511D03	511-B03	JN-2 Surveillance & Maintenance Planning and Development
511E03	511-B03	JN-3 Surveillance & Maintenance Planning and Development
511B04	511-B04	JN-1 Original Building Surveillance & Maintenance Planning and Development
511C04	511-B04	JN-1 High Bay Surveillance & Maintenance Planning and Development
511D04	511-B04	JN-2 Surveillance & Maintenance Planning and Development
511E04	511-B04	JN-3 Surveillance & Maintenance Planning and Development
513A03	513-A03	JN-1 Office & Shop Surveillance & Maintenance Inspection and Maintenance
513B03	513-A03	JN-1 Original Building Surveillance & Maintenance Inspection and Maintenance
513C03	513-A03	JN-1 High Bay Surveillance & Maintenance Inspection and Maintenance
513D03	513-A03	JN-2 Surveillance & Maintenance Inspection and Maintenance
513E03	513-A03	JN-3 Surveillance & Maintenance Inspection and Maintenance
513B04	513-A04	JN-1 Original Building Surveillance & Maintenance Inspection and Maintenance
513C04	513-A04	JN-1 High Bay Surveillance & Maintenance Inspection and Maintenance
513D04	513-A04	JN-2 Surveillance & Maintenance Inspection and Maintenance
513E04	513-A04	JN-3 Surveillance & Maintenance Inspection and Maintenance
513F03	513-D03	West Jefferson Surveillance & Maintenance TLD/Bioassay
513F04	513-D04	West Jefferson Surveillance & Maintenance TLD/Bioassay
513G03	513-G03	West Jeff S&M Radioanalytical Lab (RAL) Support
513G04	513-G04	West Jeff S&M Radioanalytical Lab (RAL) Support
52-A03	52-B03	Collect Environmental Samples
52-B03	52-B03	TLDs and Bioassays
52-C03	52-B03	Interpret Results
52-D03	52-B03	Generate Annual Site Environmental Report
52-A04	52-B04	Collect Environmental Samples
52-B04	52-B04	TLDs and Bioassays
52-C04	52-B04	Interpret Results
52-D04	52-B04	Generate Annual Site Environmental Report
52-B05	52-B05	TLDs and Bioassays
52-D05	52-B05	Generate Annual Site Environmental Report
52-F05	52-B05	Collect Environmental Samples
52-B06	52-B06	TLDs and Bioassays
52-D06	52-B06	Generate Annual Site Environmental Report
52-F06	52-B06	Collect Environmental Samples
52-D07	52-B07	Generate Annual Site Environmental Report
52-G07	52-B07	Collect Environmental Samples
52-H03	52-H03	West Jeff Environmental Monitoring Radioanalytical Lab (RAL) Support
52-H04	52-H04	West Jeff Environmental Monitoring Radioanalytical Lab (RAL) Support
52-J05	52-H05	West Jeff Environmental Monitoring Radioanalytical Lab (RAL) Support

## BCLDP Baseline: Activity ID / Work Package Matrix

Open Plan ID	Work Package Number	Description
52-J06	52-H06	West Jeff Environmental Monitoring Radioanalytical Lab (RAL) Support
53-B03	53-B03	DOE Support Services
53-B04	53-B04	DOE Support Services
53-A05	53-B05	DOE Support Services
53-A06	53-B06	DOE Support Services
611B03	611-B03	Project Management and Administration
611B04	611-B04	Project Management and Administration
611B05	611-B05	Project Management and Administration
611B06	611-B06	Project Management and Administration
611B07	611-B07	Project Management and Administration
612A03	612-B03	Project Administration / Strategic Planning
612A04	612-B04	Project Administration / Strategic Planning
612A05	612-B05	Project Administration / Strategic Planning
612C06	612-B06	Project Administration / Strategic Planning
613A03	613-A03	Project Administration Control - Cost Control/Scheduling/Estimating
613A04	613-A04	Project Administration Control - Cost Control/Scheduling/Estimating
613B05	613-A05	Project Administration Control - Cost Control/Scheduling/Estimating
613B06	613-A06	Project Administration Control - Cost Control/Scheduling/Estimating
613C07	613-A07	Project Administration Control - Cost Control/Scheduling/Estimating
613G03	613-B03	Project Records Management/Document Control
613G04	613-B04	Project Records Management/Document Control
613G05	613-B05	Project Records Management/Document Control
613H06	613-B06	Project Records Management/Document Control
613H07	613-B07	Project Records Management/Document Control
613D03	613-E03	Purchasing Fields Resources Support
613D04	613-E04	Purchasing Fields Resources Support
613E05	613-E05	Purchasing Fields Resources Support
613F06	613-E06	Purchasing Fields Resources Support
65-03	65-B03	Quality Program
65-04	65-B04	Quality Program
65-05	65-B05	Quality Program
65-06	65-B06	Quality Program
65-07	65-B07	Quality Program
781B03	781-B03	West Jefferson Decontamination Management Planning and Development
781B04	781-B04	West Jefferson Decontamination Management Planning and Development
781B05	781-B05	West Jefferson Decontamination Management Planning and Development
781B06	781-B06	West Jefferson Decontamination Management Planning and Development
781C03	781-C03	BCLDP Technician Subcontract Administration
781C04	781-C04	BCLDP Technician Subcontract Administration
781C05	781-C05	BCLDP Technician Subcontract Administration
781D03	781-D03	WJ Demolition Planning and Special Projects
781D04	781-D04	WJ Demolition Planning and Special Projects
781D05	781-D05	WJ Demolition Planning and Special Projects
781E06	781-D06	WJ Demolition Planning and Special Projects
782A03	782-B03	Decontamination Training
782A04	782-B04	Decontamination Training
782B05	782-B05	Decontamination Training
782C06	782-B06	Decontamination Training
783C03	783-A03	Characterization Management Planning and Development
783C04	783-A04	Characterization Management Planning and Development
783C05	783-A05	Characterization Management Planning and Development
783C06	783-A06	Characterization Management Planning and Development
783D07	783-A07	Characterization Management Planning and Development
783B03	783-B03	West Jefferson Radioanalytical Lab (RAL)



## BCLDP Baseline: Activity ID / Work Package Matrix

Open Plan ID	Work Package Number	Description
783B04	783-B04	West Jefferson Radioanalytical Lab (RAL)
783E05	783-B05	West Jefferson Radioanalytical Lab (RAL)
783F06	783-B06	West Jefferson Radioanalytical Lab (RAL)
784A03	784-A03	Radiation Protection
784A04	784-A04	Radiation Protection
784B05	784-A05	Radiation Protection
784C06	784-A06	Radiation Protection
784G03	784-B03	TLD's and Bioassays
784G04	784-B04	TLD's and Bioassays
784H05	784-B05	TLD's and Bioassays
784H06	784-B06	TLD's and Bioassays
784K03	784-C03	Health and Safety Meetings and Training
784L03	784-C03	Health and Safety Oversight Associated with JN-1 Office Area
784M03	784-C03	Health and Safety Oversight Associated with JN-1A Area and WSS
784N03	784-C03	Health and Safety Oversight Associated with JN-1B
784P03	784-C03	Health and Safety Oversight Associated with JN-2
784Q03	784-C03	Health and Safety Oversight Associated with JN-3
784R03	784-C03	Health and Safety Oversight Associated with External Areas
784K04	784-C04	Health and Safety Meetings and Training
784M04	784-C04	Health and Safety Oversight Associated with JN-1A Area and WSS
784N04	784-C04	Health and Safety Oversight Associated with JN-1B
784P04	784-C04	Health and Safety Oversight Associated with JN-2
784Q04	784-C04	Health and Safety Oversight Associated with JN-3
784R04	784-C04	Health and Safety Oversight Associated with External Areas
784K05	784-C05	Health and Safety Meetings and Training
784M05	784-C05	Health and Safety Oversight Associated with JN-1A Area and WSS
784N05	784-C05	Health and Safety Oversight Associated with JN-1B
784R05	784-C05	Health and Safety Oversight Associated with External Areas
784K06	784-C06	Health and Safety Meetings and Training
784R06	784-C06	Health and Safety Oversight Associated with External Areas
784J03	784-D03	Emergency Preparedness
784J04	784-D04	Emergency Preparedness
784J05	784-D05	Emergency Preparedness
784J06	784-D06	Emergency Preparedness
784S03	784-E03	Radiation Protection Operations
784S04	784-E04	Radiation Protection Operations
784S05	784-E05	Radiation Protection Operations
784T06	784-E06	Radiation Protection Operations
784F03	784-F03	Radiation Protection - Regulatory Activities.Inspections and Fees
784F04	784-F04	Radiation Protection - Regulatory Activities.Inspections and Fees
784E05	784-F05	Radiation Protection - Regulatory Activities.Inspections and Fees
784F06	784-F06	Radiation Protection - Regulatory Activities.Inspections and Fees
784E07	784-F07	Radiation Protection - Regulatory Activities.Inspections and Fees
787A03	787-B03	Laundry/Respirator Support
787A04	787-B04	Laundry/Respirator Support
787A05	787-B05	Laundry/Respirator Support
787A06	787-B06	Laundry/Respirator Support

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## BCLDP BASELINE: OTHER AREAS

### BAR LEGEND

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WORKPKG	BCOST	PCT	DU	ROU	BSTART	BFINISH	ESDATE	EFDATE	01 OCT 02 Timenow	01 OCT 03	01 OCT 04	01 OCT 05	01 OCT 06	01 OCT 07
1.2.2.2. REGULATORY COMPLIANCE														
222-B03 : REGULATORY COMPLIANCE														
222A03 Regulatory Compliance														
222-B03	\$ 205795		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
222-B04 : REGULATORY COMPLIANCE														
222B04 Regulatory Compliance									222B04					
222-B04	\$ 205795		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
222-B05 : REGULATORY COMPLIANCE														
222B05 Regulatory Compliance										222B05				
222-B05	\$ 205795		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
222-B06 : REGULATORY COMPLIANCE														
222B06 Regulatory Compliance											222B06			
222-B06	\$ 124152		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
1.2.3. INSTITUTIONAL RELATIONS														
23-B03 : PUBLIC OUTREACH														
23-03 Institutional Relations														
23-B03	\$ 145604		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
23-B04 : PUBLIC OUTREACH														
23-04 Institutional Relations									23-04					
23-B04	\$ 72803		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
23-B05 : PUBLIC OUTREACH														
23-05 Institutional Relations										23-05				
23-B05	\$ 145604		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
23-B06 : PUBLIC OUTREACH														

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WORKPKG	BCOST	PCT	DU	ROU	BSTART	BFINISH	ESDATE	EFDATE	01 OCT 02 Timenow	01 OCT 03	01 OCT 04	01 OCT 05	01 OCT 06	01 OCT 07
23-06 Institutional Relations								1						
23-B06	\$ 72803		251	251	03OCT05	29SEP06	03OCT05	29SEP06			23-06			
1.2.4. ESS&H OVERSIGHT														
24-B03 : ESS&H OVERSIGHT														
24-03 Environmental Safety and Health Oversight								1						
24-B03	\$ 87656		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
24-B04 : ESS&H OVERSIGHT														
24-04 Environmental Safety and Health Oversight								1						
24-B04	\$ 87656		253	253	01OCT03	30SEP04	01OCT03	30SEP04	24-04					
24-B05 : ESS&H OVERSIGHT														
24-05 Environmental Safety and Health Oversight								1						
24-B05	\$ 87656		252	252	01OCT04	30SEP05	01OCT04	30SEP05		24-05				
24-B06 : ESS&H OVERSIGHT														
24-06 Environmental Safety and Health Oversight								1						
24-B06	\$ 55220		251	251	03OCT05	29SEP06	03OCT05	29SEP06			24-06			
1.5.1.1. KA & WJ SURV. & MAINT. COORDINATION														
511-B03 : WEST JEFF S&M MGMT PLANNING/DEVELOPMENT														
511A03 JN-1 Office & Shop Surveillance & Maintenance Planning and Develop								1						
511-B03	\$ 21924		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
511B03 JN-1 Original Building Surveillance & Maintenance Planning and Dev								1						
511-B03	\$ 43667		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
511C03 JN-1 High Bay Surveillance & Maintenance Planning and Development								1						
511-B03	\$ 21924		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
511D03 JN-2 Surveillance & Maintenance Planning and Development								1						
511-B03	\$ 36589		252	252	01OCT02	29SEP03	01OCT02	29SEP03						

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WORKPKG	BCOST	PCT	DU	ROU	BSTART	BFINISH	ESDATE	EFDATE	01 OCT 02 Timenow	01 OCT 03	01 OCT 04	01 OCT 05	01 OCT 06	01 OCT 07
511E03 JN-3 Surveillance & Maintenance Planning and Development								1						
511-B03	\$ 21924		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
511-B04 : WEST JEFF S&M MGMT PLANNING/DEVELOPMENT														
511B04 JN-1 Original Building Surveillance & Maintenance Planning and Dev								1	511B04					
511-B04	\$ 43667		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
511C04 JN-1 High Bay Surveillance & Maintenance Planning and Development								1	511C04					
511-B04	\$ 21924		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
511D04 JN-2 Surveillance & Maintenance Planning and Development								1	511D04					
511-B04	\$ 36589		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
511E04 JN-3 Surveillance & Maintenance Planning and Development								1	511E04					
511-B04	\$ 21924		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
1.5.1.3. WJ SURVEILLANCE AND MAINTENANCE														
513-A03 : WEST JEFF S&M INSPECTION AND MAINTENANCE														
513B03 JN-1 Original Building Surveillance & Maintenance Inspection and M								1						
513-A03	\$ 100537		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
513C03 JN-1 High Bay Surveillance & Maintenance Inspection and Maintenan								1						
513-A03	\$ 50268		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
513D03 JN-2 Surveillance & Maintenance Inspection and Maintenance								1						
513-A03	\$ 83927		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
513E03 JN-3 Surveillance & Maintenance Inspection and Maintenance								1						
513-A03	\$ 50268		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
513A03 JN-1 Office & Shop Surveillance & Maintenance Inspection and Maint								1						
513-A03	\$ 50268		252	252	02OCT02	30SEP03	02OCT02	30SEP03						
513-A04 : WEST JEFF S&M INSPECTION AND MAINTENANCE														
513B04 JN-1 Original Building Surveillance & Maintenance Inspection and M								1	513B04					
513-A04	\$ 100537		253	253	01OCT03	30SEP04	01OCT03	30SEP04						

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WORKPKG	BCOST	PCT	DU	ROU	BSTART	BFINISH	ESDATE	EFDATE	01 OCT 02	01 OCT 03	01 OCT 04	01 OCT 05	01 OCT 06	01 OCT 07
513C04 JN-1 High Bay Surveillance & Maintenance Inspection and Maintenance 1									Time now					
513-A04	\$ 50268	253	253	01OCT03	30SEP04	01OCT03	30SEP04		513C04					
513D04 JN-2 Surveillance & Maintenance Inspection and Maintenance 1									513D04					
513-A04	\$ 83927	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
513E04 JN-3 Surveillance & Maintenance Inspection and Maintenance 1									513E04					
513-A04	\$ 50268	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
513-D03 : WEST JEFF S&M TLD/BIOASSAY														
513F03 West Jefferson Surveillance & Maintenance TLD/Bioassay 1														
513-D03	\$ 5223	252	252	01OCT02	29SEP03	01OCT02	29SEP03							
513-D04 : WEST JEFF S&M TLD/BIOASSAY														
513F04 West Jefferson Surveillance & Maintenance TLD/Bioassay 1									513F04					
513-D04	\$ 4013	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
513-G03 : WEST JEFF S&M RADIOANALYTICAL LAB SUPPORT														
513G03 West Jeff S&M Radioanalytical Lab (RAL) Support 1														
513-G03	\$ 10916	252	252	01OCT02	29SEP03	01OCT02	29SEP03							
513-G04 : WEST JEFF S&M RADIOANALYTICAL LAB SUPPORT														
513G04 West Jeff S&M Radioanalytical Lab (RAL) Support 1									513G04					
513-G04	\$ 5617	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
1.5.2. ENVIRONMENTAL MONITORING														
52-B03 : WEST JEFF ENVIRONMENTAL MONITORING														
52-A03 Collect Environmental Samples 1														
52-B03	\$ 250693	252	252	01OCT02	29SEP03	01OCT02	29SEP03							
52-B03 TLDs and Bioassays 1														
52-B03	\$ 26591	252	252	01OCT02	29SEP03	01OCT02	29SEP03							
52-C03 Interpret Results 1														
52-B03	\$ 7048	252	252	01OCT02	29SEP03	01OCT02	29SEP03							

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BCLDP BASELINE: OTHER AREAS

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									01 OCT 02	01 OCT 03	01 OCT 04	01 OCT 05	01 OCT 06	01 OCT 07
WORKPKG	BCOST	PCT	DU	ROU	BSTART	BFINISH	ESDATE	EFDATE						
52-D03 Generate Annual Site Environmental Report									1					
52-B03	\$ 41219		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
52-B04 : WEST JEFF ENVIRONMENTAL MONITORING														
52-A04 Collect Environmental Samples									1					
52-B04	\$ 250693		253	253	01OCT03	30SEP04	01OCT03	30SEP04	52-A04					
52-B04 TLDs and Bioassays									1					
52-B04	\$ 26591		253	253	01OCT03	30SEP04	01OCT03	30SEP04	52-B04					
52-C04 Interpret Results									1					
52-B04	\$ 7048		253	253	01OCT03	30SEP04	01OCT03	30SEP04	52-C04					
52-D04 Generate Annual Site Environmental Report									1					
52-B04	\$ 41219		253	253	01OCT03	30SEP04	01OCT03	30SEP04	52-D04					
52-B05 : WEST JEFF ENVIRONMENTAL MONITORING														
52-B05 TLDs and Bioassays									1					
52-B05	\$ 26591		252	252	01OCT04	30SEP05	01OCT04	30SEP05	52-B05					
52-D05 Generate Annual Site Environmental Report									1					
52-B05	\$ 41219		252	252	01OCT04	30SEP05	01OCT04	30SEP05	52-D05					
52-F05 Collect Environmental Samples									1					
52-B05	\$ 65205		252	252	01OCT04	30SEP05	01OCT04	30SEP05	52-F05					
52-B06 : WEST JEFF ENVIRONMENTAL MONITORING														
52-B06 TLDs and Bioassays									1					
52-B06	\$ 26591		251	251	03OCT05	29SEP06	03OCT05	29SEP06	52-B06					
52-D06 Generate Annual Site Environmental Report									1					
52-B06	\$ 41219		251	251	03OCT05	29SEP06	03OCT05	29SEP06	52-D06					
52-F06 Collect Environmental Samples									1					
52-B06	\$ 65205		251	251	03OCT05	29SEP06	03OCT05	29SEP06	52-F06					
52-B07 : WEST JEFF ENVIRONMENTAL MONITORING														

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									01 OCT 02	01 OCT 03	01 OCT 04	01 OCT 05	01 OCT 06	01 OCT 07
WORKPKG	BCOST	PCT	DU	ROU	BSTART	BFINISH	ESDATE	EFOATE	Timenow				52-D07	
52-D07 Generate Annual Site Environmental Report 1														
52-B07	\$ 41219		252	252	02OCT06	28SEP07	02OCT06	28SEP07						
52-G07 Collect Environmental Samples 1													52-G07	
52-B07	\$ 50743		252	252	02OCT06	28SEP07	02OCT06	28SEP07						
52-H03 : WEST JEFF ENVIRONMENTAL MONITORING RAL SUPPORT														
52-H03 West Jeff Environmental Monitoring Radioanalytical Lab (RAL) Suppo 1														
52-H03	\$ 212664		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
52-H04 : WEST JEFF ENVIRONMENTAL MONITORING RAL SUPPORT														
52-H04 West Jeff Environmental Monitoring Radioanalytical Lab (RAL) Suppo 1									52-H04					
52-H04	\$ 212664		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
52-H05 : WEST JEFF ENVIRONMENTAL MONITORING RAL SUPPORT														
52-J05 West Jeff Environmental Monitoring Radioanalytical Lab (RAL) Suppo 1										52-J05				
52-H05	\$ 156479		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
52-H06 : WEST JEFF ENVIRONMENTAL MONITORING RAL SUPPORT														
52-J06 West Jeff Environmental Monitoring Radioanalytical Lab (RAL) Suppo 1											52-J06			
52-H06	\$ 156479		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
1.5.3. DOE SUPPORT														
53-B03 : DOE SUPPORT SERVICES														
53-B03 DOE Support Services 1														
53-B03	\$ 6058		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
53-B04 : DOE SUPPORT SERVICES														
53-B04 DOE Support Services 1									53-B04					
53-B04	\$ 6058		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
53-B05 : DOE SUPPORT SERVICES														
53-A05 DOE Support Services 1										53-A05				
53-B05	\$ 4847		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
53-B06 : DOE SUPPORT SERVICES														

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## BCLDP BASELINE: OTHER AREAS

### BAR LEGEND

 Actuals  
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 Baseline

WORKPKG	BCOST	PCT	DU	ADU	BSTART	BFINISH	ESDATE	EFOATE	01 OCT 02 Timenow	01 OCT 03	01 OCT 04	01 OCT 05	01 OCT 06	01 OCT 07
53-A06 DOE Support Services								1			53-A06			
53-B06	\$ 4847		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
1.6.1.1. MANAGEMENT AND INTEGRATION														
611-B03 : PROJECT MANAGEMENT & ADMINISTRATION														
611B03 Project Management and Administration								1						
611-B03	\$ 310833		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
611-B04 : PROJECT MANAGEMENT & ADMINISTRATION														
611B04 Project Management and Administration								1						
611-B04	\$ 310833		253	253	01OCT03	30SEP04	01OCT03	30SEP04	611B04					
611-B05 : PROJECT MANAGEMENT & ADMINISTRATION														
611B05 Project Management and Administration								1		611B05				
611-B05	\$ 275229		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
611-B06 : PROJECT MANAGEMENT & ADMINISTRATION														
611B06 Project Management and Administration								1			611B06			
611-B06	\$ 239624		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
611-B07 : PROJECT MANAGEMENT & ADMINISTRATION														
611B07 Project Management and Administration								1				611B07		
611-B07	\$ 91743		252	252	02OCT06	28SEP07	02OCT06	28SEP07						
1.6.1.2. PROJECT PLANNING AND INTEGRATION														
612-B03 : PROJECT ADMINISTRATION AND STRATEGIC PLANNING														
612A03 Project Administration / Strategic Planning								1						
612-B03	\$ 210326		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
612-B04 : PROJECT ADMINISTRATION AND STRATEGIC PLANNING														
612A04 Project Administration / Strategic Planning								1		612A04				
612-B04	\$ 210326		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
612-B05 : PROJECT ADMINISTRATION AND STRATEGIC PLANNING														



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WORKPKG									01 OCT 02		01 OCT 03		01 OCT 04		01 OCT 05		01 OCT 06		01 OCT 07	
BCOST	PCT	DU	ADU	BSTART	BFINISH	ESDATE	EFDATE													
612A05 Project Administration / Strategic Planning									Timenow		612A05									
612-B05	\$ 210326		252	252	01OCT04	30SEP05	01OCT04	30SEP05												
612-B06 : PROJECT ADMINISTRATION AND STRATEGIC PLANNING																				
612C06 Project Administration / Strategic Planning											612C06									
612-B06	\$ 151700		251	251	03OCT05	29SEP06	03OCT05	29SEP06												
1.6.1.3. PROJECT ADMINISTRATION AND ANALYSIS																				
613-A03 : PROJECT ADMINISTRATION: COST CONTROL/SCHEDULING/ESTI																				
613A03 Project Administration Control - Cost Control/Scheduling/Estimatin 1																				
613-A03	\$ 638623		252	252	01OCT02	29SEP03	01OCT02	29SEP03												
613-A04 : PROJECT ADMINISTRATION: COST CONTROL/SCHEDULING/ESTI									613A04											
613A04 Project Administration Control - Cost Control/Scheduling/Estimatin 1																				
613-A04	\$ 638623		253	253	01OCT03	30SEP04	01OCT03	30SEP04												
613-A05 : PROJECT ADMINISTRATION: COST CONTROL/SCHEDULING/ESTI											613B05									
613B05 Project Administration Control - Cost Control/Scheduling/Estimatin 1																				
613-A05	\$ 396279		252	252	01OCT04	30SEP05	01OCT04	30SEP05												
613-A06 : PROJECT ADMINISTRATION: COST CONTROL/SCHEDULING/ESTI													613B06							
613B06 Project Administration Control - Cost Control/Scheduling/Estimatin 1																				
613-A06	\$ 350425		251	251	03OCT05	29SEP06	03OCT05	29SEP06												
613-A07 : PROJECT ADMINISTRATION: COST CONTROL/SCHEDULING/ESTI															613C07					
613C07 Project Administration Control - Cost Control/Scheduling/Estimatin 1																				
613-A07	\$ 237656		252	252	02OCT06	28SEP07	02OCT06	28SEP07												
613-B03 : PROJECT RECORDS AND DOCUMENT CONTROL																				
613G03 Project Records Management/Document Control																				
613-B03	\$ 225686		252	252	01OCT02	29SEP03	01OCT02	29SEP03												
613-B04 : PROJECT RECORDS AND DOCUMENT CONTROL																				

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WORKPKG	BCOST	PCT	DU	ADU	BSTART	BFINISH	ESDATE	EFDATE	O1 OCT 02	O1 OCT 03	O1 OCT 04	O1 OCT 05	O1 OCT 06	O1 OCT 07
613G04 Project Records Management/Document Control								1	Timenow					
613-B04	\$ 225686		253	253	01OCT03	30SEP04	01OCT03	30SEP04	613G04					
613-B05 : PROJECT RECORDS AND DOCUMENT CONTROL														
613G05 Project Records Management/Document Control								1		613G05				
613-B05	\$ 225686		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
613-B06 : PROJECT RECORDS AND DOCUMENT CONTROL														
613H06 Project Records Management/Document Control								1			613H06			
613-B06	\$ 177059		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
613-B07 : PROJECT RECORDS AND DOCUMENT CONTROL														
613H07 Project Records Management/Document Control								1				613H07		
613-B07	\$ 177059		252	252	02OCT06	28SEP07	02OCT06	28SEP07						
613-E03 : PURCHASING FIELDS RESOURCES SUPPORT														
613D03 Purchasing Fields Resources Support								1						
613-E03	\$ 179143		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
613-E04 : PURCHASING FIELDS RESOURCES SUPPORT														
613D04 Purchasing Fields Resources Support								1		613D04				
613-E04	\$ 179143		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
613-E05 : PURCHASING FIELDS RESOURCES SUPPORT														
613E05 Purchasing Fields Resources Support								1			613E05			
613-E05	\$ 87006		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
613-E06 : PURCHASING FIELDS RESOURCES SUPPORT														
613F06 Purchasing Fields Resources Support								1			613F06			
613-E06	\$ 81872		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
1.6.5. QUALITY ASSURANCE														
65-B03 : QUALITY PROGRAM														

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65-03 Quality Program									1						
65-B03	\$ 606060		252	252	01OCT02	29SEP03	01OCT02	29SEP03							
65-B04 : QUALITY PROGRAM															
65-04 Quality Program									1						
65-B04	\$ 426625		253	253	01OCT03	30SEP04	01OCT03	30SEP04							
65-B05 : QUALITY PROGRAM															
65-05 Quality Program									1						
65-B05	\$ 360437		252	252	01OCT04	30SEP05	01OCT04	30SEP05							
65-B06 : QUALITY PROGRAM															
65-06 Quality Program									1						
65-B06	\$ 247703		251	251	03OCT05	29SEP06	03OCT05	29SEP06							
65-B07 : QUALITY PROGRAM															
65-07 Quality Program									1						
65-B07	\$ 49122		252	252	02OCT06	28SEP07	02OCT06	28SEP07							
1.7.8.1. DECONTAMINATION COORDINATION															
781-B03 : WEST JEFF DECONTAMINATION MGMT PLANNING/DEVELOPMENT															
781B03 West Jefferson Decontamination Management Planning and Development									1						
781-B03	\$ 371496		252	252	01OCT02	29SEP03	01OCT02	29SEP03							
781-B04 : WEST JEFF DECONTAMINATION MGMT PLANNING/DEVELOPMENT															
781B04 West Jefferson Decontamination Management Planning and Development									1						
781-B04	\$ 352978		253	253	01OCT03	30SEP04	01OCT03	30SEP04							
781-B05 : WEST JEFF DECONTAMINATION MGMT PLANNING/DEVELOPMENT															
781B05 West Jefferson Decontamination Management Planning and Development									1						
781-B05	\$ 315796		252	252	01OCT04	30SEP05	01OCT04	30SEP05							
781-B06 : WEST JEFF DECONTAMINATION MGMT PLANNING/DEVELOPMENT															

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781B06 West Jefferson Decontamination Management Planning and Development 1									Timenow		781B06			
781-B06	\$ 221058	251	251	03OCT05	29SEP06	03OCT05	29SEP06							
781-C03 : BARTLETT SUBCONTRACT ADMINISTRATION														
781C03 BCLDP Technician Subcontract Administration 1														
781-C03	\$ 69818	252	252	01OCT02	29SEP03	01OCT02	29SEP03							
781-C04 : BARTLETT SUBCONTRACT ADMINISTRATION														
781C04 BCLDP Technician Subcontract Administration 1									781C04					
781-C04	\$ 69818	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
781-C05 : BARTLETT SUBCONTRACT ADMINISTRATION														
781C05 BCLDP Technician Subcontract Administration 1										781C05				
781-C05	\$ 69818	252	252	01OCT04	30SEP05	01OCT04	30SEP05							
781-D03 : WEST JEFF DEMO PLANNING & SPECIAL PROJECTS														
781D03 WJ Demolition Planning and Special Projects 1														
781-D03	\$ 76934	252	252	01OCT02	29SEP03	01OCT02	29SEP03							
781-D04 : WEST JEFF DEMO PLANNING & SPECIAL PROJECTS														
781D04 WJ Demolition Planning and Special Projects 1									781D04					
781-D04	\$ 76934	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
781-D05 : WEST JEFF DEMO PLANNING & SPECIAL PROJECTS														
781D05 WJ Demolition Planning and Special Projects 1										781D05				
781-D05	\$ 59373	252	252	01OCT04	30SEP05	01OCT04	30SEP05							
781-D06 :														
781E06 WJ Demolition Planning and Special Projects 1											781E06			
781-D06	\$ 59373	251	251	03OCT05	29SEP06	03OCT05	29SEP06							
1.7.8.2. DECONTAMINATION TRAINING														
782-B03 : DECONTAMINATION TRAINING														

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782A03 Decontamination Training								1						
782-B03	\$ 157259		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
782-B04 : DECONTAMINATION TRAINING														
782A04 Decontamination Training								1						
782-B04	\$ 157259		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
782-B05 : DECONTAMINATION TRAINING														
782B05 Decontamination Training								1						
782-B05	\$ 98792		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
782-B06 : DECONTAMINATION TRAINING														
782C06 Decontamination Training								1						
782-B06	\$ 78417		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
1.7.8.3. DECONTAMINATION FIELD SERVICES														
783-A03 : CHARACTERIZATION MGMT PLANNING AND DEVELOPMENT														
783C03 Characterization Management Planning and Development								1						
783-A03	\$ 86422		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
783-A04 : CHARACTERIZATION MGMT PLANNING AND DEVELOPMENT														
783C04 Characterization Management Planning and Development								1						
783-A04	\$ 86422		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
783-A05 : CHARACTERIZATION MGMT PLANNING AND DEVELOPMENT														
783C05 Characterization Management Planning and Development								1						
783-A05	\$ 86422		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
783-A06 : CHARACTERIZATION MGMT PLANNING AND DEVELOPMENT														
783C06 Characterization Management Planning and Development								1						
783-A06	\$ 86422		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
783-A07 : CHARACTERIZATION MGMT PLANNING AND DEVELOPMENT														

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WORKPKG BCOST PCT DU ROU BSTART BFINISH ESDATE EFOATE									01 OCT 02	01 OCT 03	01 OCT 04	01 OCT 05	01 OCT 06	01 OCT 07		
783D07 Characterization Management Planning and Development 1									Timenow				783D07			
783-A07 \$ 39532 252 252 02OCT06 28SEP07 02OCT06 28SEP07																
783-B03 : WJ RADIOANALYTICAL LAB (RAL) SUPPORT																
783B03 West Jefferson Radioanalytical Lab (RAL) 1																
783-B03 \$ 424555 252 252 01OCT02 29SEP03 01OCT02 29SEP03																
783-B04 : WJ RADIOANALYTICAL LAB (RAL) SUPPORT																
783B04 West Jefferson Radioanalytical Lab (RAL) 1									783B04							
783-B04 \$ 422968 253 253 01OCT03 30SEP04 01OCT03 30SEP04																
783-B05 : WJ RADIOANALYTICAL LAB (RAL) SUPPORT																
783E05 West Jefferson Radioanalytical Lab (RAL) 1										783E05						
783-B05 \$ 327808 252 252 01OCT04 30SEP05 01OCT04 30SEP05																
783-B06 : WJ RADIOANALYTICAL LAB (RAL) SUPPORT																
783F06 West Jefferson Radioanalytical Lab (RAL) 1											783F06					
783-B06 \$ 228857 251 251 03OCT05 29SEP06 03OCT05 29SEP06																
1.7.8.4. ESSH DECONTAMINATION IMPLEMENTATION																
784-A03 : RADIATION PROTECTION																
784A03 Radiation Protection 1																
784-A03 \$ 666992 252 252 01OCT02 29SEP03 01OCT02 29SEP03																
784-A04 : RADIATION PROTECTION																
784A04 Radiation Protection 1									784A04							
784-A04 \$ 666992 253 253 01OCT03 30SEP04 01OCT03 30SEP04																
784-A05 : RADIATION PROTECTION																
784B05 Radiation Protection 1										784B05						
784-A05 \$ 563222 252 252 01OCT04 30SEP05 01OCT04 30SEP05																
784-A06 : RADIATION PROTECTION																

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784C06 Radiation Protection														
784-A06	\$ 218994		251	251	03OCT05	29SEP06	03OCT05	29SEP06			784C06			
784-B03 : TLDS AND BIOASSAYS														
784G03 TLD's and Bioassays														
784-B03	\$ 296970		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
784-B04 : TLDS AND BIOASSAYS														
784G04 TLD's and Bioassays														
784-B04	\$ 264414		253	253	01OCT03	30SEP04	01OCT03	30SEP04	784G04					
784-B05 : TLDS AND BIOASSAYS														
784H05 TLD's and Bioassays										784H05				
784-B05	\$ 259404		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
784-B06 : TLDS AND BIOASSAYS														
784H06 TLD's and Bioassays											784H06			
784-B06	\$ 79659		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
784-C03 : HEALTH AND SAFETY														
784K03 Health and Safety Meetings and Training														
784-C03	\$ 92072		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
784L03 Health and Safety Oversight Associated with JN-1 Office Area														
784-C03	\$ 14045		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
784M03 Health and Safety Oversight Associated with JN-1A Area and WSS														
784-C03	\$ 18185		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
784N03 Health and Safety Oversight Associated with JN-1B														
784-C03	\$ 18185		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
784P03 Health and Safety Oversight Associated with JN-2														
784-C03	\$ 13042		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
784Q03 Health and Safety Oversight Associated with JN-3														
784-C03	\$ 11162		252	252	01OCT02	29SEP03	01OCT02	29SEP03						

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784R03 Health and Safety Oversight Associated with External Areas 1									Time now					
784-C03	\$ 16804	252	252	01OCT02	29SEP03	01OCT02	29SEP03							
784-C04 : HEALTH AND SAFETY														
784K04 Health and Safety Meetings and Training 1									784K04					
784-C04	\$ 92072	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
784M04 Health and Safety Oversight Associated with JN-1A Area and WSS 1									784M04					
784-C04	\$ 18185	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
784N04 Health and Safety Oversight Associated with JN-1B 1									784N04					
784-C04	\$ 18185	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
784P04 Health and Safety Oversight Associated with JN-2 1									784P04					
784-C04	\$ 13042	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
784Q04 Health and Safety Oversight Associated with JN-3 1									784Q04					
784-C04	\$ 11162	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
784R04 Health and Safety Oversight Associated with External Areas 1									784R04					
784-C04	\$ 16804	253	253	01OCT03	30SEP04	01OCT03	30SEP04							
784-C05 : HEALTH AND SAFETY														
784K05 Health and Safety Meetings and Training 1										784K05				
784-C05	\$ 92072	252	252	01OCT04	30SEP05	01OCT04	30SEP05							
784M05 Health and Safety Oversight Associated with JN-1A Area and WSS 1										784M05				
784-C05	\$ 18185	252	252	01OCT04	30SEP05	01OCT04	30SEP05							
784N05 Health and Safety Oversight Associated with JN-1B 1										784N05				
784-C05	\$ 18185	252	252	01OCT04	30SEP05	01OCT04	30SEP05							
784R05 Health and Safety Oversight Associated with External Areas 1										784R05				
784-C05	\$ 16804	252	252	01OCT04	30SEP05	01OCT04	30SEP05							
784-C06 : HEALTH AND SAFETY														
784K06 Health and Safety Meetings and Training 1											784K06			
784-C06	\$ 46050	251	251	03OCT05	29SEP06	03OCT05	29SEP06							





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784R06 Health and Safety Oversight Associated with External Areas								1	Timenow					
784-C06	\$ 16804		251	251	03OCT05	29SEP06	03OCT05	29SEP06			784R06			
784-D03 : EMERGENCY PREPAREDNESS														
784J03 Emergency Preparedness								1						
784-D03	\$ 199294		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
784-D04 : EMERGENCY PREPAREDNESS														
784J04 Emergency Preparedness								1						
784-D04	\$ 199294		253	253	01OCT03	30SEP04	01OCT03	30SEP04	784J04					
784-D05 : EMERGENCY PREPAREDNESS														
784J05 Emergency Preparedness								1						
784-D05	\$ 159453		252	252	01OCT04	30SEP05	01OCT04	30SEP05		784J05				
784-D06 : EMERGENCY PREPAREDNESS														
784J06 Emergency Preparedness								1						
784-D06	\$ 144274		251	251	03OCT05	29SEP06	03OCT05	29SEP06			784J06			
784-E03 : RADIATION PROTECTION OPERATIONS														
784S03 Radiation Protection Operations								1						
784-E03	\$ 238933		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
784-E04 : RADIATION PROTECTION OPERATIONS														
784S04 Radiation Protection Operations								1						
784-E04	\$ 238933		253	253	01OCT03	30SEP04	01OCT03	30SEP04	784S04					
784-E05 : RADIATION PROTECTION OPERATIONS														
784S05 Radiation Protection Operations								1						
784-E05	\$ 238933		252	252	01OCT04	30SEP05	01OCT04	30SEP05		784S05				
784-E06 : RADIATION PROTECTION OPERATIONS														
784T06 Radiation Protection Operations								1						
784-E06	\$ 91236		251	251	03OCT05	29SEP06	03OCT05	29SEP06			784T06			
784-F03 : RADIATION PROTECTION-REGULATORY ACTIVITIES/INSPECTION														

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784F03 Radiation Protection - Regulatory Activities.Inspections and Fees 1									Time now					
784-F03	\$ 111006		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
784-F04 : RADIATION PROECTION-REGULATORY ACTIVITIES/INSPECTION									784F04					
784F04 Radiation Protection - Regulatory Activities.Inspections and Fees 1														
784-F04	\$ 111006		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
784-F05 : RADIATION PROECTION-REGULATORY ACTIVITIES/INSPECTION									784E05					
784E05 Radiation Protection - Regulatory Activities.Inspections and Fees 1														
784-F05	\$ 142646		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
784-F06 : RADIATION PROECTION-REGULATORY ACTIVITIES/INSPECTION									784F06					
784F06 Radiation Protection - Regulatory Activities.Inspections and Fees 1														
784-F06	\$ 127080		251	251	03OCT05	29SEP06	03OCT05	29SEP06						
784-F07 : RADIATION PROECTION-REGULATORY ACTIVITIES/INSPECTION									784E07					
784E07 Radiation Protection - Regulatory Activities.Inspections and Fees 1														
784-F07	\$ 174794		252	252	02OCT06	28SEP07	02OCT06	28SEP07						
1.7.8.7. DECONTAMINATION MATERIALS, SUPPLIES and SERV														
787-B03 : LAUNDRY/RESPIRATOR SUPPORT									787A04					
787A03 Laundry/Respirator Support 1														
787-B03	\$ 201036		252	252	01OCT02	29SEP03	01OCT02	29SEP03						
787-B04 : LAUNDRY/RESPIRATOR SUPPORT									787A05					
787A04 Laundry/Respirator Support 1														
787-B04	\$ 201036		253	253	01OCT03	30SEP04	01OCT03	30SEP04						
787-B05 : LAUNDRY/RESPIRATOR SUPPORT									787A06					
787A05 Laundry/Respirator Support 1														
787-B05	\$ 184261		252	252	01OCT04	30SEP05	01OCT04	30SEP05						
787-B06 : LAUNDRY/RESPIRATOR SUPPORT														

OPEN PLAN - POM  
 Report: ZBAR  
 Project: BASELINE  
 Timenow: 01OCT02  
 Date: 27JUN02  
 Page: 18

# Battelle

## BCLDP BASELINE: OTHER AREAS

### BAR LEGEND

 Actuals  
 Forecast  
 Baseline

										01	01	01	01	01	01
										OCT	OCT	OCT	OCT	OCT	OCT
										02	03	04	05	06	07
WORKPKG	BCOST	PCT	DJ	ROU	BSTART	BFINISH	ESDATE	EFOATE		Timenow					
787A06 Laundry/Respirator Support								1				787A06			
787-B06	\$ 184261	251	251	03OCT05	29SEP06	03OCT05	29SEP06								

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06

WBS Number: 222

Activity Number: 222B

Activity Title: Regulatory Compliance

Work Package Number: 222-B03, 222-B04, 222-B05, 222-B06

Work Package Title: Regulatory Compliance

**Work Package Description:** Maintain a regulatory compliance program to facilitate compliance with external requirements on the project, such as government agency regulations and orders and waste disposal facility acceptance criteria, and support an independent oversight program.

### Basis of Estimate

**Strategy for Accomplishing Task:** Identify changes to source documents of external requirements and inform cognizant personnel; maintain the Regulatory Compliance Database; administer the Event Reporting System; review changes to plans and procedures; provide support as requested, provide documentation required by RC&ESHO procedures to Project Records in accordance with Procedure PR-AP-17.1

### Applicable Requirements/Procedures:

1. Contract statement of work
2. Work Plan RC-WP-006 for RC&ESHO activities
3. Procedure RC-AP-1.0 in support of the independent oversight program
4. Procedure RC-AP-2.0 for maintenance of Regulatory Compliance Database
5. Procedure RC-AP-3.0 for Event Reporting System
6. Procedure PR-AP-17.1 providing documentation required by RC&ESHO procedures
7. Required to perform independent oversight program

### Input Descriptions:

1. N/A

### Output Descriptions:

1. Weekly notices of items of regulatory interest
2. Completed forms DDO-185 for event reporting
3. Event log
4. Updated regulatory compliance database
5. Database change packages
6. Comments on draft plans/procedures
7. Action Tracking System, updated
8. Documentation generated in response to requests

### Assumptions:

1. Hours required to complete tasks are as follows.

	<u>FY03,04,05</u>	<u>FY06</u>
Administrative Activities – 2 hrs/wk x 46 wks =	92 hrs	92 hrs
Meeting Attendance – 3 hrs/wk x 46 wks =	138 hrs	70 hrs
Event Reports - 100 reports at 2.5 hrs/report =	250 hrs	20 hrs
Database Maintenance – 6 hrs/wk x 46 wks =	276 hrs	276 hrs
Requirements Review – 2 hrs/wk x 46 weeks =	92 hrs	70 hrs

Activity Number: 222B

Assistance Requests – 3.5 hrs/wk x 46 wks =	161 hrs	200 hrs
Procedure Reviews – 50 procedures at 4.5 hrs/procedure =	225 hrs	40 hrs
Procedure Updates – 2 updates at 25 hrs/update =	50 hrs	0 hrs
Total =	1284 hrs	768 hrs

2. In FY2001, 112 event reports were processed; the estimate of 100 reports is considered conservative. 200 procedures + 30 plans are reviewed/revised at least every two years =  $230/2 = 115$ , which is substantially larger than the number assumed (50)  
Meetings: 30 min/wk Monday Safety Meeting, 50 min/wk for morning HP briefing, remainder for miscellaneous meetings, as called  
Database maintenance includes incorporating new/revised requirements, adding/revising implementing document citations, including compliance assessments, making corrections, etc.  
Requirements review includes daily Federal Register, Ohio Monthly Record, DOE orders, industry standards, waste facility WACs, etc., would require additional hours; requirements from these sources will become out-of-date in the database over time.  
Procedure updates are for RC&ESHO work plan/procedures, as needed; four total, two per two year review cycle.  
Administrative includes maintenance of work packages, monitoring cost reports, providing input for weekly/monthly status reports, attendance at mandatory training, reviewing external letters/documents per Program Manager's request
3. Thirty hours of a Support Professional's time will be sufficient to correct problems associated with/maintain the database program.
4. There is no allowance in the final year for project close-out activities.

**Estimated Time to Plan the Work (Including Review and Approval): N/A**

#### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year. These estimates will be constant over the life of the project with exception of the last year, when building demolition has been completed.

#### **Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	FY03,04,05/ FY06		N/A

Manager/Senior Staff	HBB	1/year/1284 / 768		N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL	FY03,04,05,06		N/A
Support Professional	HBP	1/year/30		N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary purchases anticipated – use history.

**Special Equipment/Material:** No extraordinary purchases anticipated – use history.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** The estimator has over 25 years of experience in the nuclear power, nuclear waste disposal, and D&D industries in the areas of licensing, regulatory compliance, and independent oversight.

**What experience is directly related to BCLDP?** The last ten years of the estimator's experience has been devoted full time to supporting the BCLDP in the areas of independent oversight and regulatory compliance.

**Did we apply a complexity factor during our thought process?** The program described above is a bare minimum program, but it is adequate to support BCLDP needs. Of all the activities listed, event reports and procedure updates and reviews are most likely to be affected by the overall level of program activity. Activities are reduced after demolition of buildings, when support for external remediation activities is required.

**Completed by:** Mark Jackson

**Date:** 6/10/02

**Rev. No.:** 3

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06

**WBS Number:** 23

**Activity Number:** 23

**Activity Title:** Institutional Relations

**Work Package Number:** 23-B03, 23-B04, 23-B05, 23-B06

**Work Package Title:** Institutional Relations

**Work Package Description:** Provide communications materials, briefings support, and involvement opportunities for all interested or affected individuals and groups.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Focus on communications and public outreach for the West Jefferson site.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Publications, videos, exhibits, news media packets, and site tours
2. Relationships with key stakeholders
3. Media skills training, as needed, for project representatives
4. Interact on behalf of the BCLDP with BMI communications and DOE-OH public affairs staff

#### **Assumptions:**

1. Project will continue to require monitoring of concerns of interested and affected individuals and groups and to support providing information materials and activities.
2. Project will have adequate funding for public affairs activities.
3. The other direct costs are estimated based on historical expenditures with escalation.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year and will be constant over the life of the project.

#### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH	<b>FY 03, 04, 05, 06</b>		N/A
BCO Support	HBCO	1/year/ 940, 470, 940, 470		N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Other Direct Costs:** PMP graphics, printing and technical editing; \$7,200 (FY 04, 06) and \$14,400 (FY03, 05)

**Special Equipment/Material:**

**Comments/Explanations:** Program's limited progress, due to budget reductions, reduces the need for new public information materials, frequency of updates of existing materials, and staff oversight time.



**Activities Matrix:**

Fy03: increase coverage due to continuing TRU shipping and start demolition of JN-2 and JN-3

FY05: increase coverage due to start and completion demolition of JN-1

<u>Activity-Manager/Senior Staff</u>	<u>Labor Category</u>	<u>FY03</u> <u>Hours</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>
Planning	HBCO	120	60	120	60
Interact with media, briefings	HBCO	50	25	50	25
Assist with site tours	HBCO	50	25	50	25
Interact with client, stakeholders	HBCO	100	50	100	50
Draft stakeholder letters	HBCO	50	25	50	25
Draft Program Manager's viewgraphs	HBCO	50	25	50	25
Coordinate materials production	HBCO	60	30	60	30
Attend DOE-OH meetings	HBCO	20	10	20	10
Prepare fact sheets	HBCO	300	150	300	150
Coordinate posters, displays	HBCO	100	50	100	50
Review reports (e.g. SER)	HBCO	<u>40</u>	<u>20</u>	<u>40</u>	<u>20</u>
Total hours		940	470	940	470

**Basis of Estimate:**

**What is the estimator's experience?** Twenty five years in the areas of institutional relations and public affairs. Experience includes performance of each of the activities described above.

**What experience is directly related to BCLDP?** Eleven years performing the above functions.

**Did we apply a complexity factor during our thought process?** Experience has shown that institutional relations support cannot be accurately predicted, other than to say that project needs for support will arise (1) as the cleanup work continues, (2) stakeholder interest is exhibited, or (3) public communications again become vital because the project's budget allows resumed progress. Need does not show a strong relationship to level of activities, although certain activities do generate more concern than others.

**Completed by:** Helen Latham  
**Update:** C. Theibert

**Date:** 5/7//01  
7/10/01

**Rev. No.:** 3

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06

**WBS Number:** 24

**Activity Number:** 24

**Activity Title:** Environmental, Safety, and Health Oversight

**Work Package Number:** 24-B03, 24-B04, 24-B05, 24-B06

**Work Package Title:** Environmental, Safety, and Health Oversight

**Work Package Description:** The contract statement of work states that a regulatory compliance program to assure compliance with applicable government agency orders and requirements will be maintained. It is also DOE and Battelle policy to assure workers a safe and healthful workplace and provide protection of the environment. This work package provides for a system of independent oversight, using oversight assessments, walkdowns, and event trending performed in accordance with Procedure RC-AP-1.0, to verify compliance with ES&H requirements and industry best practices, thus meeting the requirements described above.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Perform independent oversight of project activities and work-site conditions to verify compliance with applicable requirements and to track non-compliances until they are corrected. Perform at least four oversight assessments in accordance with Procedure RC-AP-1.0; perform 12 to 24 oversight walkdowns in accordance with Procedure RC-AP-1.0; track any findings resulting from the previous activities to completion of corrective action; perform trending of findings, events, and any other sources of information to identify any potential adverse trends; provide documentation required by RC&ESHO procedures to Project Records in accordance with Procedure PR-AP-17.1

### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. 10 CFR 20.1101(c)
3. Work Plan RC-WP-006
4. Procedure RC-AP-1.0
5. Procedure PR-AP-17.1

### **Input Descriptions:**

1. N/A

### **Output Descriptions:**

1. Oversight assessment reports
2. Walkdown reports
3. Trending analysis
4. Assessment action reports (AARS)
5. Assessment log
6. Walkdown log

### Assumptions:

1. Time required to complete planned activities FY03 – FY05:

4 assessments at 112.5 hr/assessment =	450 hrs
12 walkdowns at 6 hrs/walkdown =	72 hrs
Quarterly trending analysis at 8 hrs each=	<u>32 hrs</u>
Total =	554 hrs

Estimated hours are based on actual past experience. Walkdowns include preparation time, performance, generation of report, and follow-up.

2. Time required to complete planned activities FY06:

1 assessment at 125 hrs	125 hrs
24 walkdowns at 8 hrs/walkdown	192 hrs
Quarterly trending analysis at 8 hrs each	<u>32 hrs</u>
Total =	349 hrs

3. An informal lessons learned program will be performed only if resources are available, and only to the extent that they are available.
4. There is no allowance in the final year for project close-out activities.

**Estimated Time to Plan the Work (Including Review and Approval): N/A**

### Estimated Resources Required to Plan the Work

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year and are constant over the life of the project, with the exception of the final year.

### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	FY03,04,05 FY06		N/A
Manager/Senior Staff	HBB	1/year/554 349		N/A

Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary purchases anticipated – use history.

**Special Equipment/Material:** No extraordinary purchases anticipated – use history.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** The estimator has over 25 years of experience in the nuclear power, nuclear waste disposal, and D&D industries in the areas of licensing, regulatory compliance, and independent oversight.

**What experience is directly related to BCLDP?** The last ten years of the estimator's experience has been devoted full time to supporting the BCLDP in the areas of independent oversight and regulatory compliance.

**Did we apply a complexity factor during our thought process?** The program described above is a bare minimum program, and it is already well below the optimal level. Therefore, through the next several years, as buildings are completed and/or demolished, the level of support under this task will not decrease. In the final year (FY06), emphasis will change from assessments (programmatic emphasis) to additional walkdowns (task specific), with corresponding reduction in hours. Also, the oversight program covers not just D&D work in the field, but other support areas such as waste management, records, document control, training, quality, characterization, etc. It is not, therefore, substantially affected by completion of specific milestones until near the end of the project, when support activities become discontinued. Proposed staffing levels are constant until the three major buildings are released/demolished (approximately a 40% reduction at that time).

**Completed by:** Mark Jackson

**Date:** 6/10/02

**Rev. No.:** 2

☒ **FY 03 up to the start of JN1 Office & Shop Demolition**

**WBS Number:** 511

**Activity Number:** 511A

**Activity Title:** JN-1 Office & Shop Surveillance and Maintenance Planning & Development

**Work Package Number:** 511-B03

**Work Package Title:** West Jefferson Surveillance and Maintenance Task Coordination

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify and manage surveillance, inspection, and maintenance tasks

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. N/A

**Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the West Jefferson north site which may create a risk of hazardous exposure to the staff, public, environment, and property.

**Assumptions:**

1. Resources required for management of S&M efforts are assumed to remain at the levels listed until demolition of the subject area and then go to zero.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Per Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	55		N/A
Technical Advisors	HBTA	11		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	11		N/A
Decon Ops Hourly	HBH	2 / 125		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Completed by:** J. L. Stickel (upd- DAS)

**Date:** 6/10/02

**Rev. No.:** 3

# Labor Breakdown for S&M 511A

	Management	Report Prep, Plan	Computer Support Tickler Update	Building Walkdown	Facilities & Contractor Scheduling
HBB	.03				
HBH	2 / .0075	2 / .015	2 / .0075	2 / .015	2 / .023
HBTA	1 / .003	1 / .003			
HBS		1 / .003	1 / .003		



☒ FY 03 ☒ FY 04 up to the start of JN1 Original Building Demolition

**WBS Number:** 511

**Activity Number:** 511B

**Activity Title:** JN-1 Original Building Surveillance and Maintenance Planning & Development

**Work Package Number:** 511-B03, -B04

**Work Package Title:** West Jefferson Surveillance and Maintenance Task Coordination

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify and manage surveillance, inspection, and maintenance tasks

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. N/A

**Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the West Jefferson north site which may create a risk of hazardous exposure to the staff, public, environment, and property.

**Assumptions:**

1. Resources required for management of S&M efforts are assumed to remain at the levels listed until demolition of the subject area and then go to zero.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Per Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	110		N/A
Technical Advisors	HBTA	22		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	22		N/A
Decon Ops Hourly	HBH	2 / 248		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Completed by:** J. L. Stickel (upd- DAS)

**Date:** 6/10/02

**Rev. No.:** 3

# Labor Breakdown for S&M 511B

	Management	Report Prep, Plan	Computer Support Tickler Update	Building Walkdown	Facilities & Contractor Scheduling
HBB	.06				
HBH	2 / .015	2 / .03	2 / .015	2 / .03	2 / .045
HBTA	1 / .006	1 / .006			
HBS		1 / .006	1 / .006		

☒ FY 03 ☒ FY 04 up to the start of JN1 High Bay Demolition

**WBS Number:** 511

**Activity Number:** 511C

**Activity Title:** JN-1 High Bay Surveillance and Maintenance Planning & Development

**Work Package Number:** 511-B03, -B04

**Work Package Title:** West Jefferson Surveillance and Maintenance Task Coordination

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify and manage surveillance, inspection, and maintenance tasks

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. N/A

**Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the West Jefferson north site which may create a risk of hazardous exposure to the staff, public, environment, and property.

**Assumptions:**

1. Resources required for management of S&M efforts are assumed to remain at the levels listed until demolition of the subject area and then go to zero.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Per Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	55		N/A
Technical Advisors	HBTA	11		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	11		N/A
Decon Ops Hourly	HBH	2 / 125		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Basis of Estimate:**

What is the estimator's experience? Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Comments/Explanations:**

**Completed by:** J. L. Stickel (upd-DAS)

**Date:** 6/10/02

**Rev. No.:** 3

### Labor Breakdown for S&M 511C

	Management	Report Prep, Plan	Computer Support Tickler Update	Building Walkdown	Facilities & Contractor Scheduling
HBB	.03				
HBH	2 / .0075	2 / .015	2 / .0075	2 / .015	2 / .023
HBTA	1 / .003	1 / .003			
HBS		1 / .003	1 / .003		



☒ FY 03 ☒ FY 04 up to the start of JN2 Demolition

**WBS Number:** 511

**Activity Number:** 511D

**Activity Title:** JN-2 Surveillance and Maintenance Planning & Development

**Work Package Number:** 511-B03, -B04

**Work Package Title:** West Jefferson Surveillance and Maintenance Task Coordination

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify and manage surveillance, inspection, and maintenance tasks

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. N/A

**Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the West Jefferson north site which may create a risk of hazardous exposure to the staff, public, environment, and property.

**Assumptions:**

1. Resources required for management of S&M efforts are assumed to remain at the levels listed until demolition of the subject area and then go to zero.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Per Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	92		N/A
Technical Advisors	HBTA	19		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	19		N/A
Decon Ops Hourly	HBH	2 / 207		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Completed by:** J. L. Stickel (upd-DAS)

**Date:** 6/10/02

**Rev. No.:** 3

# Labor Breakdown for S&M 511B

	Management	Report Prep, Plan	Computer Support Tickler Update	Building Walkdown	Facilities & Contractor Scheduling
HBB	.05				
HBH	2 / .0125	2 / .025	2 / .013	2 / .025	2 / .037
HBTA	1 / .005	1 / .005			
HBS		1 / .005	1 / .005		

☒ FY 03 ☒ FY 04 up to the start of JN3 Demolition

**WBS Number:** 511

**Activity Number:** 511E

**Activity Title:** JN-3 Surveillance and Maintenance Planning & Development

**Work Package Number:** 511-B03, -B04

**Work Package Title:** West Jefferson Surveillance and Maintenance Task Coordination

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify and manage surveillance, inspection, and maintenance tasks

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. N/A

**Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the West Jefferson north site which may create a risk of hazardous exposure to the staff, public, environment, and property.

**Assumptions:**

1. Resources required for management of S&M efforts are assumed to remain at the levels listed until demolition of the subject area and then go to zero.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Per Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	55		N/A
Technical Advisors	HBTA	11		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	11		N/A
Decon Ops Hourly	HBH	2 / 125		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Completed by:** J. L. Stickel (upd-DAS)

**Date:** 6/10/02

**Rev. No.:** 3

### Labor Breakdown for S&M 511E

	Management	Report Prep, Plan	Computer Support Tickler Update	Building Walkdown	Facilities & Contractor Scheduling
HBB.0 3					
HBH	2 / .0075	2 / .015	2 / .0075	2 / .015	2 / .023
HBTA	1 / .003	1 / .003			
HBS		1 / .003	1 / .003		



☒ **FY 03 up to the start of JN1 Office & Shop Area Demolition**

**WBS Number:** 513

**Activity Number:** 513A

**Activity Title:** JN-1 Office & Shop Surveillance and Maintenance Inspection and Maintenance

**Work Package Number:** 513-A03

**Work Package Title:** Surveillance and Maintenance Inspection and Maintenance

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify, contain, and prevent any potentially hazardous condition within the JN-1 Office & Shop which may create a risk of hazardous exposure to the staff, public, environment, and property.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. Procedure SM-CP-001
3. Procedure SM-OP-001
4. Procedure SM-OP-003
5. Procedure SM-OP-005
6. Referenced documents within these procedures
7. Selected DD and HL procedures

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the JN-1 Office & Shop which may create a risk of hazardous exposure to the staff, public, environment, and property.
2. RAL samples for gamma spec: 8.

#### **Assumptions:**

1. Tabulated resources are based on specific building & area for the balance of its existence.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	37		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	3		N/A
Battelle Technician	HBT	264		N/A
Battelle Technician O/T	HBTO	4		N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH	83		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE	69		N/A
BCO Skilled Laborer O/T	HCEO	14		N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	6		N/A
Bartlett Maint Specialist	HRDS	14		N/A
Bartlett Health Physics	HRH	11		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** Mid City Electric 69 hr @ \$44.96 = \$3102

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Completed by:** J. L. Stickel (upd-DAS)

**Date:** 6/10/02

**Rev. No.:** 3

# Labor Breakdown for S&M 513

	<b>Buildings &amp; S&amp;M Walkdown</b>	<b>S&amp;M Data Packs</b>	<b>Calibrations, DOD Tests, Scheduled Inspections, HEPA Filter Changes</b>	<b>Facilities Inspections Servicing</b>	<b>After Hrs. Emergency Call-In</b>	<b>Escorting</b>	<b>RAL Procedure Revisions</b>
HBTA	1 / Y / .006						
HBTL	1 / Y / .002						
HBT	1 / Y / .045	1 / Y / .015	2 / Y / .053	1 / 4 / .008		1 / Y / .023	
HBTD					1 / Y / .002		
HBH			1 / Y / .03	1 / Y / .015			
HCE				6 / Y / .03	6 / Y / .004	6 / Y / .004	
HCED					6 / Y / .04		
HRD				2 / Y / .002		2 / Y / .002	
HRDS				1 / Y / .008			
HRH							1 / Y / .006

☒ FY 03 ☒ FY 04 up to the start of JN1 Original Building Demolition

**WBS Number:** 513

**Activity Number:** 513B

**Activity Title:** JN-1 Original Building Surveillance and Maintenance Inspection and Maintenance

**Work Package Number:** 513-A03, -A04

**Work Package Title:** Surveillance and Maintenance Inspection and Maintenance

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify, contain, and prevent any potentially hazardous condition within the JN-1 Original Building which may create a risk of hazardous exposure to the staff, public, environment, and property.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. Procedure SM-CP-001
3. Procedure SM-OP-001
4. Procedure SM-OP-003
5. Procedure SM-OP-005
6. Referenced documents within these procedures
7. Selected DD and HL procedures

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the JN-1 Original Building which may create a risk of hazardous exposure to the staff, public, environment, and property.
2. RAL samples for gamma spec: 16.

#### **Assumptions:**

1. Tabulated resources are based on specific building & area for the balance of its existence.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	74		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	6		N/A
Battelle Technician	HBT	528		N/A
Battelle Technician O/T	HBTO	8		N/A
RAL Staff	HL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH	166		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE	138		N/A
BCO Skilled Laborer O/T	HCEO	28		N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	12		N/A
Bartlett Maint Specialist	HRDS	28		N/A
Bartlett Health Physics	HRH	22		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** Mid City Electric – 138 hr @ \$44.96 = \$6204

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Completed by:** J. L. Stickel (upd-DAS)

**Date:** 6/10/02

**Rev. No.:** 3

# Labor Breakdown for S&M 513

	<b>Buildings &amp; S&amp;M Walkdown</b>	<b>S&amp;M Data Packs</b>	<b>Calibrations, DOD Tests, Scheduled Inspections, HEPA Filter Changes</b>	<b>Facilities Inspections Servicing</b>	<b>After Hrs. Emergency Call-In</b>	<b>Escorting</b>	<b>RAL Procedure Revisions</b>
HBTA	1 / Y / .012						
HBTL	1 / Y / .004						
HBT	1 / Y / .09	1 / Y / .03	2 / Y / .106	1 / 4 / .016		1 / Y / .016	
HBTD					1 / Y / .004		
HBH			1 / Y / .06	1 / Y / .03			
HCE				6 / Y / .06	6 / Y / .0075	6 / Y / .0075	
HCED					6 / Y / .08		
HRD				2 / Y / .003		2 / Y / .003	
HRDS				1 / Y / .015			
HRH							1 / Y / .012



☒ FY 03 ☒ FY 04 up to the start of JN1 High Bay Demolition

**WBS Number:** 513

**Activity Number:** 513C

**Activity Title:** JN-1 High Bay Surveillance and Maintenance Inspection and Maintenance

**Work Package Number:** 513-A03, -A04

**Work Package Title:** Surveillance and Maintenance Inspection and Maintenance

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify, contain, and prevent any potentially hazardous condition within the JN-1 1 High Bay which may create a risk of hazardous exposure to the staff, public, environment, and property.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. Procedure SM-CP-001
3. Procedure SM-OP-001
4. Procedure SM-OP-003
5. Procedure SM-OP-005
6. Referenced documents within these procedures
7. Selected DD and HL procedures

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the JN-1 1 High Bay which may create a risk of hazardous exposure to the staff, public, environment, and property.
2. RAL samples for gamma spec: 8.

#### **Assumptions:**

1. Tabulated resources are based on specific building & area for the balance of its existence.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	37		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	3		N/A
Battelle Technician	HBT	264		N/A
Battelle Technician O/T	HBTO	4		N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH	83		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE	69		N/A
BCO Skilled Laborer O/T	HCEO	14		N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	6		N/A
Bartlett Maint Specialist	HRDS	14		N/A
Bartlett Health Physics	HRH	11		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** Mid City Electric – 69 hr @ \$44.96 = \$3102

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Completed by:** J. L. Stickel (upd-DAS)

**Date:** 6/10/02

**Rev. No.:** 3

# Labor Breakdown for S&M 513

	Buildings & S&M Walkdown	S&M Data Packs	Calibrations, DOD Tests, Scheduled Inspections, HEPA Filter Changes	Facilities Inspections Servicing	After Hrs. Emergency Call-In	Escorting	RAL Procedure Revisions
HBTA	1 / Y / .006						
HBTL	1 / Y / .002						
HBT	1 / Y / .045	1 / Y / .015	2 / Y / .053	1 / 4 / .008		1 / Y / .023	
HBTD					1 / Y / .002		
HBH			1 / Y / .03	1 / Y / .015			
HCE				6 / Y / .03	6 / Y / .004	6 / Y / .004	
HCED					6 / Y / .04		
HRD				2 / Y / .002		2 / Y / .002	
HRDS				1 / Y / .008			
HRH							1 / Y / .006

☒ FY 03 ☒ FY 04 up to the start of JN-2 Demolition

**WBS Number:** 513

**Activity Number:** 513D

**Activity Title:** JN-2 Surveillance and Maintenance Inspection and Maintenance

**Work Package Number:** 513-A03, -A04

**Work Package Title:** Surveillance and Maintenance Inspection and Maintenance

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify, contain, and prevent any potentially hazardous condition within the JN-2 which may create a risk of hazardous exposure to the staff, public, environment, and property.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. Procedure SM-CP-001
3. Procedure SM-OP-001
4. Procedure SM-OP-003
5. Procedure SM-OP-005
6. Referenced documents within these procedures
7. Selected DD and HL procedures

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the JN-2 which may create a risk of hazardous exposure to the staff, public, environment, and property.
2. RAL samples for gamma spec: 12.

#### **Assumptions:**

1. Tabulated resources are based on specific building & area for the balance of its existence.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	61		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	5		N/A
Battelle Technician	HBT	440		N/A
Battelle Technician O/T	HBTO	6		N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH	138		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE	115		N/A
BCO Skilled Laborer O/T	HCEO	23		N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	10		N/A
Bartlett Maint Specialist	HRDS	24		N/A
Bartlett Health Physics	HRH	25		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** Mid City Electric – 115 hr @ \$44.96 = \$5170

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Completed by:** J. L. Stickel (upd-DAS)

**Date:** 6/10/02

**Rev. No.:** 3

# Labor Breakdown for S&M 513

	Buildings & S&M Walkdown	S&M Data Packs	Calibrations, DOD Tests, Scheduled Inspections, HEPA Filter Changes	Facilities Inspections Servicing	After Hrs. Emergency Call-In	Escorting	RAL Procedure Revisions
HBTA	1 / Y / .01						
HBTL	1 / Y / .003						
HBT	1 / Y / .07	1 / Y / .03	2 / Y / .09	1 / 4 / .01		1 / Y / .04	
HBTD					1 / Y / .003		
HBH			1 / Y / .05	1 / Y / .03			
HCE				6 / Y / .05	6 / Y / .005	6 / Y / .005	
HCED					6 / Y / .06		
HRD				2 / Y / .003		2 / Y / .003	
HRDS				1 / Y / .01			
HRH							1 / Y / .01



☒ FY 03 ☒ FY 04 up to the start of JN3 Demolition

**WBS Number:** 513

**Activity Number:** 513E

**Activity Title:** JN-3 Surveillance and Maintenance Inspection and Maintenance

**Work Package Number:** 513-A03, -A04

**Work Package Title:** Surveillance and Maintenance Inspection and Maintenance

**Work Package Description:** Continued surveillance, inspection, and maintenance of facilities in which government-sponsored nuclear research and development operations were conducted and that have become contaminated with radioactivity as a result of these operations pending completion of decontamination and decommissioning.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** identify, contain, and prevent any potentially hazardous condition within the JN-3 which may create a risk of hazardous exposure to the staff, public, environment, and property.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. Procedure SM-CP-001
3. Procedure SM-OP-001
4. Procedure SM-OP-003
5. Procedure SM-OP-005
6. Referenced documents within these procedures
7. Selected DD and HL procedures

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Ensure the identification, containment, and prevention of any potentially hazardous conditions within the JN-3 which may create a risk of hazardous exposure to the staff, public, environment, and property.
2. RAL samples for gamma spec: 8.

#### **Assumptions:**

1. Tabulated resources are based on specific building & area for the balance of its existence.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	37		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	3		N/A
Battelle Technician	HBT	264		N/A
Battelle Technician O/T	HBTO	4		N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH	83		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE	69		N/A
BCO Skilled Laborer O/T	HCEO	14		N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	6		N/A
Bartlett Maint Specialist	HRDS	14		N/A
Bartlett Health Physics	HRH	11		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** Mid City Electric 69 hr @ \$44.96 = \$3102

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 40 years experience with the daily operation of complex projects.

**What experience is directly related to BCLDP?** Ten years of direct BCLDP experience directing daily activities; 5 years experience with S&M and 2 years as S&M Manager

**Did we apply a complexity factor during our thought process?** The S&M involvements have been separated by logical building areas as they might apply during planned baseline D&D schedules

**Completed by:** J. L. Stickel (upd-DAS)

**Date:** 6/10/02

**Rev. No.:** 3

# Labor Breakdown for S&M 513

	Buildings & S&M Walkdown	S&M Data Packs	Calibrations, DOD Tests, Scheduled Inspections, HEPA Filter Changes	Facilities Inspections Servicing	After Hrs. Emergency Call-In	Escorting	RAL Procedure Revisions
HBTA	1 / Y / .006						
HBTL	1 / Y / .002						
HBT	1 / Y / .045	1 / Y / .015	2 / Y / .053	1 / 4 / .008		1 / Y / .023	
HBTD					1 / Y / .002		
HBH			1 / Y / .03	1 / Y / .015			
HCE				6 / Y / .03	6 / Y / .004	6 / Y / .004	
HCED					6 / Y / .04		
HRD				2 / Y / .002		2 / Y / .002	
HRDS				1 / Y / .008			
HRH							1 / Y / .006

☒ FY 03 ☒ FY 04 up to the start of JN1, JN-2, JN-3 Demolition

**Trigger Point:** Valid until no surveillance and maintenance (S&M) activities required

**WBS Number:** 513

**Activity Number:** 513F

**Activity Title:** West Jefferson Surveillance and Maintenance TLD/Bioassay Cost

**Work Package Number:** 513-D03, -D04

**Work Package Title:** West Jefferson Surveillance and Maintenance TLD/Bioassay Cost

**Work Package Description:** Provide dosimetry services associated with surveillance and maintenance activities. This includes thermoluminescent dosimetry (TLDs), in-vitro bioassay (principally urine), in-vivo bioassay (whole body count), records administration, computer database maintenance, and maintenance of contracts for bioassay services.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide the required dosimetry to staff and subcontractor staff; accurately record dose (internal and external).

#### **Applicable Requirements/Procedures:**

1. Contract statement of work

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Daily activities of TLD issuance and accountability
2. Quarterly TLD change-out
3. Quarterly DOE occupational exposure reports
4. Monthly bioassay processing (each worker once per year)
5. Annual dose reports for each affected worker (NRC form 5)

#### **Assumptions:**

1. Number of staff/visitors requiring TLD/Bioassay remains constant.
2. TLD/Bioassay schedules will remain the same.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A
Hourly	HBH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Other Direct Costs:** See Bioassay and TLD Breakdown Page 3 of 3

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

What is the estimator's experience? 10 years experience in radiation protection under NRC and DOE and 9.5 years total BCLDP project-related experience.

**What experience is directly related to BCLDP? 3.25 years BCLDP radiation protection.**

**Did we apply a complexity factor during our thought process? No**

**Completed by:** April C. Chance

**Date:** 05/21/2001

**Rev. No.:** 0

**WBS 5.1.3 FY03**

	<b>TOTAL</b>	<b>1<sup>st</sup> Qtr</b>	<b>2<sup>nd</sup> Qtr</b>	<b>3<sup>rd</sup> Qtr</b>	<b>4<sup>th</sup> Qtr</b>
BATTELLE TLD WJ	\$1,020	\$255	\$255	\$255	\$255
B TLD KA	\$0	\$0.00	\$0.00	\$0.00	
RINGS TLD WJ	\$0	\$0	\$0	\$0	\$0
R TLD KA	\$0	\$0	\$0	\$0	
CONTRACTOR TLD WJ	\$0	\$0	\$0	\$0	\$0
C TLD KA	\$0	\$0.00	\$0.00	\$0.00	
EVIR TLD	\$0	\$0.00			
EM TLD	\$0	\$0	\$0	\$0	\$0
WHOLE BODY	\$0	\$0		\$0	
MULTIPACKS -TLD	\$0	\$0	\$0	\$0	\$0
QTR SPRD TOTAL	\$1,020	\$255	\$255	\$255	\$255

EVEN SPEAD 12Mo      **\$3,235**

**WP Total FY03              \$4,255**

**WBS 5.1.3 FY04**

	<b>TOTAL</b>	<b>1<sup>st</sup> Qtr</b>	<b>2<sup>nd</sup> Qtr</b>	<b>3<sup>rd</sup> Qtr</b>	<b>4<sup>th</sup> Qtr</b>
BATTELLE TLD WJ	\$680	\$170	\$170	\$170	\$170
B TLD KA	\$0	\$0.00	\$0.00	\$0.00	
RINGS TLD WJ	\$0	\$0	\$0	\$0	\$0
R TLD KA	\$0	\$0	\$0	\$0	
CONTRACTOR TLD WJ	\$0	\$0	\$0	\$0	\$0
C TLD KA	\$0	\$0.00	\$0.00	\$0.00	
EVIR TLD	\$0	\$0.00			
EM TLD	\$0	\$0	\$0	\$0	\$0
WHOLE BODY	\$0	\$0		\$0	
MULTIPACKS -TLD	\$0	\$0	\$0	\$0	\$0
QTR SPRD TOTAL	\$680	\$170	\$170	\$170	\$170

EVEN SPEAD 12Mo      **\$2,588**

**WP Total FY04              \$3,268**



☒ FY 03 ☒ FY 04

**Until Hot Cells are Gone**

**WBS Number:** 513

**Activity Number:** 513G

**Activity Title:** West Jefferson S&M Radioanalytical Lab (RAL) Support

**Work Package Number:** 513-G03, -G04

**Work Package Title:** S&M

**Work Package Description:** Provide Radioanalytical services in support of the BCLDP S&M needs.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Radioanalytical analyses of S&M samples.

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. Request sample analyses

**Output Descriptions:**

1. Analytical data results reported to clients
2. Quality Control data for instrumentation and analyses

**Assumptions:**

1. See table included in Comments/Explanations with Trigger Point information.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

<b>Labor Type</b>	<b>Code</b>	<b>Persons/Days/Hours</b>
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL	0.04 FTE / 75 hrs/ FY '03 0.02 FTE/ 38 hrs/ FY '04		N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	0.01 FTE / 18 hrs / FY '03 0.01 FTE / 12 hrs / FY '04		N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH	0.04 FTE / 75 hrs/ FY '03 0.02 FTE/ 38 hrs/FY '04		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** N/A

**Special Equipment/Material:** N/A

**Comments/Explanations:**

**Basis of Estimate:**

**Estimator's Experience:** 17 years in radiochemical laboratory

**BCLDP Experience:** 6 years in Radioanalytical Laboratory

**Complexity Factor:**

The table below lists the proposed reductions based on current knowledge of baseline activities.

Trigger Point	RAL Oversight FTEs Required	% of Current Effort	% Reduction from Previous Trigger Point
Current Program (FY '02)	0.11	100	N/A
Demolish JN2 & JN3	0.09	82	18
Demolish JN1	0.05	56	44

**Completed by:** Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3

Activity Number: 513G

☒ FY 03 ☒ FY04 until hot cells are completed

**WBS Number:** 52

**Activity Number:** 52-A

**Activity Title:** Collect Environmental Samples

**Work Package Number:** 52-B03, 52-B04

**Work Package Title:** Environmental Monitoring

**Work Package Description:** Perform sampling/collection of environmental media as required by the BCLDP Environmental Monitoring Plan. All sampling is performed in accordance with BCLDP environmental monitoring procedures.

### Basis of Estimate

**Strategy for Accomplishing Function:** Sampling is accomplished utilizing a schedule based on the calendar year. This includes weekly, monthly, quarterly, semi-annual, and annual sampling.

**Applicable Requirements/Procedures:**

DD-98-01; EM-OP-001, 002; EM-SP-001, 002, 003, 004, 005, 006, 007, 008, 009, 011; DD-93-04; HS-AP-5.0; HP-AP-36.0; QD-AP-5.1, 6.1; RL-AP-1.0; TD-AP-2.0.

**Input Descriptions:**

1. N/A

**Output Descriptions:**

1. Environmental Samples

Sample Type	FY03-04
Alpha Isotopic	91
Gamma Spec	175
Gross Alpha/Beta	777
Radium 226	1
Radium 228	1
Strontium 90	88

**Assumptions:**

1. See trigger points under Complexity Factors (page 3)

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### Estimated Resources Required to Plan the Work

*In the following table, for each appropriate labor type enter the # of Persons involved in planning the activity, the # of Days (full or partial) they will be involved, and the total # of person-Hours necessary to plan the work, e.g., 2/5/36*

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	
Technical Advisors	HBTA	
Project Manager/HP Manager	HBPM	
Task Leader	HBTL	
Secretary/Clerical	HBS	
Support Professional	HBP	
Bartlett Health Physics	HRH	

**Estimated Time to Perform the Work:** One year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; the PPE/Laundry Group to be used during the performance of the work; and the Total # of Jumps; e.g., 4/20/640 Group 1 160*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			
Manager/Senior Staff	HBB			
Technical Advisors	HBTA			
Project Manager/HP Manager	HBPM			
Task Leader	HBTL			
Battelle Technician	HBT			
Battelle Technician O/T	HBTO			
RAL Staff	HBL	1/Year/300		
Support Professional	HBP	1/Year/1400		
Secretary/Clerical	HBS			
Decon Ops Hourly	HBH			
BCO Support	HBCO	1/Year/200		
BCO Skilled Laborer	HCE			
BCO Skilled Laborer O/T	HCEO			
BCO Facility Manager	HCF			
Bartlett Technician	HRD	1/Year/150		
Bartlett Maint Specialist	HRDS			
Bartlett Health Physics	HRH	1/Year/1600		
Bartlett Admin Support	HRA			

**Subcontract/Purchased Service:**

**Special Equipment/Material:** N/A

**Comments/Explanations:** N/A

**Completed by:** Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3

**Estimator's experience:** 17 years radiochemical and environmental

**BCLDP Experience:** 6 years radioanalytical and environmental monitoring

**Complexity Factor:** The closure of the JN-1 hot cells will be the initial trigger point for a marked reduction in environmental sampling. The table below describes the proposed reductions based on both IVC closure and interim onsite storage following completion of D&D. These reductions occur in routine sampling activities only. Should the BCLDP move back into S&M mode, BCO environmental management has indicated that more monitoring may be required.

Trigger Point	% Reduction From Previous Trigger Point	% of Current Effort
Current Program	N/A	100
Closure of Hot Cells	74	26
Closure of RAL	22.5	77.5
Post D&D IVC Closure	95	5
Post D&D Interim Storage	30	70

**Attachments**

☒ FY 03 ☒ FY04 ☒ FY 05 ☒ FY06

**WBS Number:** 52

**Activity Number:** 52B

**Activity Title:** TLDs and Bioassays

**Work Package Number:** 52-B03, -B04, -B05, -B06

**Work Package Title:** Environmental Monitoring

**Work Package Description:** Provide dosimetry services associated with environmental and staff TLDs and bioassays.

### **Basis of Estimate**

**Strategy for Accomplishing Function:** Provide the required dosimetry to staff and subcontractor staff and processing of environmental TLDs. Analysis provided by vendor.

#### **Applicable Requirements/Procedures:**

DD-98-01; EM-SP-008; DD-93-05; QD-AP-4.1, 7.1.

#### **Input Descriptions:**

1. Environmental samples

#### **Output Descriptions:**

1. Environmental data

#### **Assumptions:**

1. Environmental TLDs and bioassays will remain at current levels until completion of BCLDP.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

*In the following table, for each appropriate labor type enter the # of Persons involved in planning the activity, the # of Days (full or partial) they will be involved, and the total # of person-Hours necessary to plan the work, e.g., 2/5/36*

<b>Labor Type</b>	<b>Code</b>	<b>Persons/Days/Hours</b>
Manager/Senior Staff	HBB	
Technical Advisors	HBTA	
Project Manager/HP Manager	HBPM	
Task Leader	HBTL	
Secretary/Clerical	HBS	
Support Professional	HBP	
Bartlett Health Physics	HRH	

**Estimated Time to Perform the Work:** One Year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; the PPE/Laundry Group to be used during the performance of the work; and the Total # of Jumps; e.g., 4/20/640 Group 1 160*

<b>Labor Type</b>	<b>Code</b>	<b>Persons/Days/Hours</b>	<b>PPE/Laundry Group</b>	<b>Total Jumps</b>
Program Manager	HBA			
Manager/Senior Staff	HBB			
Technical Advisors	HBTA			
Project Manager/HP Manager	HBPM			
Task Leader	HBTL			
Battelle Technician	HBT			
Battelle Technician O/T	HBTO			
RAL Staff	HBL			
Support Professional	HBP			
Secretary/Clerical	HBS			
Decon Ops Hourly	HBH			
BCO Support	HBCO			
BCO Skilled Laborer	HCE			
BCO Skilled Laborer O/T	HCEO			
BCO Facility Manager	HCF			
Bartlett Technician	HRD			
Bartlett Maint Specialist	HRDS			
Bartlett Health Physics	HRH			
Bartlett Admin Support	HRA			

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Other Direct Costs:**

- 1 staff X 1 Bio 1/Year @ \$296 each = \$296
- 1 staff X 1 Bio 2/Year @ \$351 each = \$351
- 2 staff X 1 Bio 1/Year @ \$296 each = \$592
- 2 staff X 1 Bio 2/Year @ \$351 each = \$702
- 3 staff X 4 TLDs/Year @ \$85 each = \$1,020
- 55 Environmental TLDs 4 Time/Year @ \$85 each = \$18,700

**Total..... \$21,661**

**Comments/Explanations:** N/A

**Completed by:** Gretchen Farnung

**Date:** 6/14/02

**Rev. No.:** 4

**Estimator's experience:** 17 years radiochemical and environmental

**BCLDP Experience:** 6 years radioanalytical laboratory and environmental monitoring

**Complexity Factor:** The number of environmental TLDs will be re-evaluated for reduction annually as source term is reduced/relocated.

Sampling Event	Frequency	Analysis	Annual Events
<b>Environmental Air</b>			
EA-1	weekly	Gross Alpha/Beta	52.00
EA-2	weekly	Gross Alpha/Beta	52.00
EA-3	weekly	Gross Alpha/Beta	52.00
EA-4	weekly	Gross Alpha/Beta	52.00
EA-1 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-2 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-3 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-4 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-1 Pump Vane Replacement	annually	N/A	1.00
EA-2 Pump Vane Replacement	annually	N/A	1.00
EA-3 Pump Vane Replacement	annually	N/A	1.00
EA-4 Pump Vane Replacement	annually	N/A	1.00
EA-1 Flowmeter Calibration	annually	N/A	1.00
EA-2 Flowmeter Calibration	annually	N/A	1.00
EA-3 Flowmeter Calibration	annually	N/A	1.00
EA-4 Flowmeter Calibration	annually	N/A	1.00
EA-1 Timer Calibration	annually	N/A	1.00
EA-2 Timer Calibration	annually	N/A	1.00
EA-3 Timer Calibration	annually	N/A	1.00
EA-4 Timer Calibration	annually	N/A	1.00
<b>TLDs</b>	quarterly	N/A	4.00
<b>Stack Pump Rebuild</b>			
S1 thru S7	annually	N/A	1.00
<b>Stacks</b>			
S-1 (HLC)	weekly	Gross Alpha/Beta	52.00
S-2 (LLC)	weekly	Gross Alpha/Beta	52.00
S-3 (MTC)	weekly	Gross Alpha/Beta	52.00
S-4 (CAA)	weekly	Gross Alpha/Beta	52.00
S-5 (A/G Cell)	weekly	Gross Alpha/Beta	52.00
S-6 (Evap. Room)	weekly	Gross Alpha/Beta	52.00
S-7 (HEC)	weekly	Gross Alpha/Beta	52.00
S-11 (RAL)	weekly	Gross Alpha/Beta	52.00
HS-1 (RAL JN-1)	weekly	Gross Alpha/Beta	52.00
S-1 (HLC)	monthly	Gamma	12.00
S-2 (LLC)	monthly	Gamma	12.00
S-3 (MTC)	monthly	Gamma	12.00
S-4 (CAA)	monthly	Gamma	12.00
S-5 (A/G Cell)	monthly	Gamma	12.00
S-6 (Evap. Room)	monthly	Gamma	12.00
S-7 (HEC)	monthly	Gamma	12.00
S-11 (RAL)	monthly	Gamma	12.00
HS-1 (RAL JN-1)	monthly	Gamma	12.00
S-1 (HLC)	quarterly	Pu, U, Sr-90	4.00
S-2 (LLC)	quarterly	Pu, U, Sr-90	4.00
S-3 (MTC)	quarterly	Pu, U, Sr-90	4.00
S-4 (CAA)	quarterly	Pu, U, Sr-90	4.00
S-5 (A/G Cell)	quarterly	Pu, U, Sr-90	4.00
S-6 (Evap. Room)	quarterly	Pu, U, Sr-90	4.00
S-7 (HEC)	quarterly	Pu, U, Sr-90	4.00
S-11 (RAL)	quarterly	Pu, U, Sr-90	4.00
HS-1 (RAL JN-1)	quarterly	Pu, U, Sr-90	4.00



<b>AMS-4</b>			
S-1 (HLC) Performance Test	weekly	N/A	52.00
S-2 (LLC) Performance Test	weekly	N/A	52.00
S-3 (MTC) Performance Test	weekly	N/A	52.00
S-4 (CAA) Performance Test	weekly	N/A	52.00
S-5 (A/G Cell) Performance Test	weekly	N/A	52.00
S-6 (Evap. Room) Performance Test	weekly	N/A	52.00
S-7 (HEC) Performance Test	weekly	N/A	52.00
S-1 (HLC) Alarm Test	weekly	N/A	52.00
S-2 (LLC) Alarm Test	weekly	N/A	52.00
S-3 (MTC) Alarm Test	weekly	N/A	52.00
S-4 (CAA) Alarm Test	weekly	N/A	52.00
S-5 (A/G Cell) Alarm Test	weekly	N/A	52.00
S-6 (Evap. Room) Alarm Test	weekly	N/A	52.00
S-7 (HEC) Alarm Test	weekly	N/A	52.00
S-1 (HLC) Calibration	semi-annually	N/A	2.00
S-2 (LLC) Calibration	semi-annually	N/A	2.00
S-3 (MTC) Calibration	semi-annually	N/A	2.00
S-4 (CAA) Calibration	semi-annually	N/A	2.00
S-5 (A/G Cell) Calibration	semi-annually	N/A	2.00
S-6 (Evap. Room) Calibration	semi-annually	N/A	2.00
S-7 (HEC) Calibration	semi-annually	N/A	2.00
<b>AMS-3</b>			
(JN-1 Operating Area) Performance Test	weekly	N/A	52.00
(JN-1 High Bay) Performance Test	weekly	N/A	52.00
(JN-1 Operating Area) Alarm Test	weekly	N/A	52.00
(JN-1 High Bay) Alarm Test	weekly	N/A	52.00
<b>Drinking Water</b>			
EW-5	weekly	N/A	52.00
EW-5 Composite	monthly	Gross Alpha/Beta	12.00
EW-5 Composite	quarterly	Gamma	4.00
EW-5 Composite	annually	Pu, U, Sr-90, Ra-226/228	1.00
<b>Wastewater</b>			
EW-1	weekly	Gross Alpha/Beta	52.00
EW-2	weekly	Gross Alpha/Beta	52.00
EW-1 Composite	monthly	Gamma	12.00
EW-2 Composite	monthly	Gamma	12.00
EW-1 Composite	quarterly	Pu, U, Sr-90	4.00
EW-2 Composite	quarterly	Pu, U, Sr-90	4.00
<b>Environmental Water</b>			
EW-3	weekly	N/A	52.00
EW-4	weekly	N/A	52.00
EW-10	weekly	N/A	52.00
EW-11	weekly	N/A	52.00
EW-3 Composite	monthly	Gross Alpha/Beta	12.00
EW-4 Composite	monthly	Gross Alpha/Beta	12.00
EW-10 Composite	monthly	Gross Alpha/Beta	12.00
EW-11 Composite	monthly	Gross Alpha/Beta	12.00
<b>Rainwater Collection Vault</b>	quarterly	Gross Alpha/Beta, Gamma	4.00
<b>Groundwater</b>	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00

<b>Sediment</b>	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00
<b>Fish</b>			
Silver Lake	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00
Darby Creek	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00
<b>Garden Crops</b>			
On-site	annually	Gamma, Pu, U, Sr-90	1.00
Off-site	annually	Gamma, Pu, U, Sr-90	1.00
<b>Field Crops</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00
Sector 5	annually	Gamma, Pu, U, Sr-90	1.00
Sector 6	annually	Gamma, Pu, U, Sr-90	1.00
Sector 7	annually	Gamma, Pu, U, Sr-90	1.00
Sector 8	annually	Gamma, Pu, U, Sr-90	1.00
<b>Vegetation</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00
Sector 5	annually	Gamma, Pu, U, Sr-90	1.00
Sector 6	annually	Gamma, Pu, U, Sr-90	1.00
Sector 7	annually	Gamma, Pu, U, Sr-90	1.00
Sector 8	annually	Gamma, Pu, U, Sr-90	1.00
<b>Soil</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00
Sector 5	annually	Gamma, Pu, U, Sr-90	1.00
Sector 6	annually	Gamma, Pu, U, Sr-90	1.00
Sector 7	annually	Gamma, Pu, U, Sr-90	1.00
Sector 8	annually	Gamma, Pu, U, Sr-90	1.00

Sampling Event	Frequency	Analysis	Annual Events
<b>Environmental Air</b>			
EA-1	weekly	Gross Alpha/Beta	52.00
EA-2	weekly	Gross Alpha/Beta	52.00
EA-3	weekly	Gross Alpha/Beta	52.00
EA-4	weekly	Gross Alpha/Beta	52.00
EA-1 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-2 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-3 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-4 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-1 Pump Vane Replacement	annually	N/A	1.00
EA-2 Pump Vane Replacement	annually	N/A	1.00
EA-3 Pump Vane Replacement	annually	N/A	1.00
EA-4 Pump Vane Replacement	annually	N/A	1.00
EA-1 Flowmeter Calibration	annually	N/A	1.00
EA-2 Flowmeter Calibration	annually	N/A	1.00
EA-3 Flowmeter Calibration	annually	N/A	1.00
EA-4 Flowmeter Calibration	annually	N/A	1.00
EA-1 Timer Calibration	annually	N/A	1.00
EA-2 Timer Calibration	annually	N/A	1.00
EA-3 Timer Calibration	annually	N/A	1.00
EA-4 Timer Calibration	annually	N/A	1.00
<b>TLDs</b>	quarterly	N/A	4.00
<b>Stacks</b>			
S-11 (RAL)	weekly	Gross Alpha/Beta	52.00
HS-1 (RAL JN-1)	weekly	Gross Alpha/Beta	52.00
S-11 (RAL)	monthly	Gamma	12.00
HS-1 (RAL JN-1)	monthly	Gamma	12.00
S-11 (RAL)	quarterly	Pu, U, Sr-90	4.00
HS-1 (RAL JN-1)	quarterly	Pu, U, Sr-90	4.00
<b>Drinking Water</b>			
EW-5	weekly	N/A	52.00
EW-5 Composite	monthly	Gross Alpha/Beta	12.00
EW-5 Composite	quarterly	Gamma	4.00
EW-5 Composite	annually	Pu, U, Sr-90, Ra-226/228	1.00
<b>Wastewater</b>			
EW-1	weekly	Gross Alpha/Beta	52.00
EW-2	weekly	Gross Alpha/Beta	52.00
EW-1 Composite	monthly	Gamma	12.00
EW-2 Composite	monthly	Gamma	12.00
EW-1 Composite	quarterly	Pu, U, Sr-90	4.00
EW-2 Composite	quarterly	Pu, U, Sr-90	4.00
<b>Environmental Water</b>			
EW-3	monthly	N/A	12.00
EW-4	monthly	N/A	12.00
EW-10	monthly	N/A	12.00
EW-11	monthly	N/A	12.00
EW-3 Composite	quarterly	Gross Alpha/Beta	4.00
EW-4 Composite	quarterly	Gross Alpha/Beta	4.00
EW-10 Composite	quarterly	Gross Alpha/Beta	4.00
EW-11 Composite	quarterly	Gross Alpha/Beta	4.00

<b>Rainwater Collection Vault</b>	quarterly	Gross Alpha/Beta, Gamma	4.00
<b>Groundwater</b>	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00
<b>Sediment</b>	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00
<b>Fish</b>			
Silver Lake	annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	1.00
Darby Creek	annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	1.00
<b>Garden Crops</b>			
On-site	annually	Gamma, Pu, U, Sr-90	1.00
Off-site	annually	Gamma, Pu, U, Sr-90	1.00
<b>Field Crops</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00
<b>Vegetation</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00
<b>Soil</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00

Sampling Event *	Frequency	Analysis	Annual Events
<b>Environmental Water</b>			
EW-3	quarterly	N/A	4.00
EW-4	quarterly	N/A	4.00
EW-10	quarterly	N/A	4.00
EW-11	quarterly	N/A	4.00
EW-3 Composite	annually	Gross Alpha/Beta	1.00
EW-4 Composite	annually	Gross Alpha/Beta	1.00
EW-10 Composite	annually	Gross Alpha/Beta	1.00
EW-11 Composite	annually	Gross Alpha/Beta	1.00
<b>Sediment</b>	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00

Sampling Event	Frequency	Analysis	Annual Events
<b>Environmental Air</b>			
EA-1	weekly	Gross Alpha/Beta	52.00
EA-2	weekly	Gross Alpha/Beta	52.00
EA-3	weekly	Gross Alpha/Beta	52.00
EA-4	weekly	Gross Alpha/Beta	52.00
EA-1 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-2 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-3 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-4 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-1 Pump Vane Replacement	annually	N/A	1.00
EA-2 Pump Vane Replacement	annually	N/A	1.00
EA-3 Pump Vane Replacement	annually	N/A	1.00
EA-4 Pump Vane Replacement	annually	N/A	1.00
EA-1 Flowmeter Calibration	annually	N/A	1.00
EA-2 Flowmeter Calibration	annually	N/A	1.00
EA-3 Flowmeter Calibration	annually	N/A	1.00
EA-4 Flowmeter Calibration	annually	N/A	1.00
EA-1 Timer Calibration	annually	N/A	1.00
EA-2 Timer Calibration	annually	N/A	1.00
EA-3 Timer Calibration	annually	N/A	1.00
EA-4 Timer Calibration	annually	N/A	1.00
<b>TLDs</b>	quarterly	N/A	4.00
<b>Drinking Water</b>			
EW-5	weekly	N/A	52.00
EW-5 Composite	monthly	Gross Alpha/Beta	12.00
EW-5 Composite	quarterly	Gamma	4.00
EW-5 Composite	annually	Pu, U, Sr-90, Ra-226/228	1.00
<b>Wastewater</b>			
EW-1	weekly	Gross Alpha/Beta	52.00
EW-2	weekly	Gross Alpha/Beta	52.00
EW-1 Composite	monthly	Gamma	12.00
EW-2 Composite	monthly	Gamma	12.00
EW-1 Composite	quarterly	Pu, U, Sr-90	4.00
EW-2 Composite	quarterly	Pu, U, Sr-90	4.00
<b>Environmental Water</b>			
EW-3	monthly	N/A	12.00
EW-4	monthly	N/A	12.00
EW-10	monthly	N/A	12.00
EW-11	monthly	N/A	12.00
EW-3 Composite	quarterly	Gross Alpha/Beta	4.00
EW-4 Composite	quarterly	Gross Alpha/Beta	4.00
EW-10 Composite	quarterly	Gross Alpha/Beta	4.00
EW-11 Composite	quarterly	Gross Alpha/Beta	4.00
<b>Rainwater Collection Vault</b>	quarterly	Gross Alpha/Beta, Gamma	4.00
<b>Groundwater</b>	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00
<b>Sediment</b>	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00
<b>Fish</b>			
Silver Lake	annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	1.00
Darby Creek	annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	1.00

<b>Garden Crops</b>			
On-site	annually	Gamma, Pu, U, Sr-90	1.00
Off-site	annually	Gamma, Pu, U, Sr-90	1.00
<b>Field Crops</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00
<b>Vegetation</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00
<b>Soil</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00

Sampling Event	Frequency	Analysis	Annual Events
<b>Environmental Air*</b>			
EA-1	weekly	Gross Alpha/Beta	52.00
EA-2	weekly	Gross Alpha/Beta	52.00
EA-3	weekly	Gross Alpha/Beta	52.00
EA-4	weekly	Gross Alpha/Beta	52.00
EA-1 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-2 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-3 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-4 (composite)	quarterly	Pu, U, Sr-90, Gamma	4.00
EA-1 Pump Vane Replacement	annually	N/A	1.00
EA-2 Pump Vane Replacement	annually	N/A	1.00
EA-3 Pump Vane Replacement	annually	N/A	1.00
EA-4 Pump Vane Replacement	annually	N/A	1.00
EA-1 Flowmeter Calibration	annually	N/A	1.00
EA-2 Flowmeter Calibration	annually	N/A	1.00
EA-3 Flowmeter Calibration	annually	N/A	1.00
EA-4 Flowmeter Calibration	annually	N/A	1.00
EA-1 Timer Calibration	annually	N/A	1.00
EA-2 Timer Calibration	annually	N/A	1.00
EA-3 Timer Calibration	annually	N/A	1.00
EA-4 Timer Calibration	annually	N/A	1.00
<b>TLDs</b>	quarterly	N/A	4.00
<b>Environmental Water</b>			
EW-3	monthly	N/A	12.00
EW-4	monthly	N/A	12.00
EW-10	monthly	N/A	12.00
EW-11	monthly	N/A	12.00
EW-3 Composite	quarterly	Gross Alpha/Beta	4.00
EW-4 Composite	quarterly	Gross Alpha/Beta	4.00
EW-10 Composite	quarterly	Gross Alpha/Beta	4.00
EW-11 Composite	quarterly	Gross Alpha/Beta	4.00
<b>Groundwater</b>	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00
<b>Sediment</b>	semi-annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	2.00
<b>Fish</b>			
Silver Lake	annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	1.00
Darby Creek	annually	Gross Alpha/Beta, Gamma, Pu, U, Sr-90	1.00
<b>Garden Crops</b>			
On-site	annually	Gamma, Pu, U, Sr-90	1.00
Off-site	annually	Gamma, Pu, U, Sr-90	1.00
<b>Field Crops</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00
<b>Vegetation</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00



<b>Soil</b>			
Sector 1	annually	Gamma, Pu, U, Sr-90	1.00
Sector 2	annually	Gamma, Pu, U, Sr-90	1.00
Sector 3	annually	Gamma, Pu, U, Sr-90	1.00
Sector 4	annually	Gamma, Pu, U, Sr-90	1.00
<b>*This Does Not Account For Storage Facility Exhaust/Stack Monitoring</b>			

☒ FY 03 ☒ FY04 until hot cells are completed

**WBS Number:** 52

**Activity Number:** 52C

**Activity Title:** Interpret Results

**Work Package Number:** 52- B03, -B04

**Work Package Title:** Environmental Monitoring

**Work Package Description:** Environmental sampling data is reviewed and compared to regulatory requirements.

### **Basis of Estimate**

**Strategy for Accomplishing Function:** Data is reviewed upon receipt from RAL or vendor.

### **Applicable Requirements/Procedures:**

“This is a necessary activity in order to proceed with Function Number 1.5.4.”  
DD-93-04; TD-AP-2.0.

### **Input Descriptions:**

1. Unreviewed data

### **Output Descriptions:**

1. Reviewed data

### **Assumptions:**

1. Environmental labor will remain at current levels until JN-1 emission sources are decommissioned.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

*In the following table, for each appropriate labor type enter the # of Persons involved in planning the activity, the # of Days (full or partial) they will be involved, and the total # of person-Hours necessary to plan the work, e.g., 2/5/36*

<b>Labor Type</b>	<b>Code</b>	<b>Persons/Days/Hours</b>
Manager/Senior Staff	HBB	
Technical Advisors	HBTA	
Project Manager/HP Manager	HBPM	
Task Leader	HBTL	
Secretary/Clerical	HBS	
Support Professional	HBP	
Bartlett Health Physics	HRH	

**Estimated Time to Perform the Work:** 100 Hours

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; the PPE/Laundry Group to be used during the performance of the work; and the Total # of Jumps; e.g., 4/20/640 Group 1 160*

<b>Labor Type</b>	<b>Code</b>	<b>Persons/Days/Hours</b>	<b>PPE/Laundry Group</b>	<b>Total Jumps</b>
Program Manager	HBA			
Manager/Senior Staff	HBB			
Technical Advisors	HBTA			
Project Manager/HP Manager	HBPM			
Task Leader	HBTL			
Battelle Technician	HBT			
Battelle Technician O/T	HBTO			
RAL Staff	HL	1/Year/10		
Support Professional	HBP	1/Year/50		
Secretary/Clerical	HBS			
Decon Ops Hourly	HBH			
BCO Support	HBCO			
BCO Skilled Laborer	HCE			
BCO Skilled Laborer O/T	HCEO			
BCO Facility Manager	HCF			
Bartlett Technician	HRD			
Bartlett Maint Specialist	HRDS			
Bartlett Health Physics	HRH	1/Year/40		
Bartlett Admin Support	HRA			

**Subcontract/Purchased Service:** N/A

**Special Equipment/Material:** N/A

**Comments/Explanations:** N/A

**Completed by:** Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 2

**Estimator's experience:** 17 years radiochemical and environmental

**BCLDP Experience:** 6 years radioanalytical and environmental monitoring

**Complexity Factor:** N/A

☒ FY 03 ☒ FY04 ☒ FY 05 ☒ FY06 ☒ FY07

**WBS Number:** 52

**Activity Number:** 52D

**Activity Title:** Generate Annual Site Environmental Report

**Work Package Number:** 52-B03, -B04, -B05, -B06, -B07

**Work Package Title:** Environmental Monitoring

**Activity Description:** Generate report. Provide annual report to DOE. Report is also required by NRC, USEPA, and OEPA. Copies of the report are also distributed to various state / local agencies and libraries.

### **Basis of Estimate**

**Strategy for Accomplishing Function:** BCLDP environmental data and narrative / activity descriptions are compiled.

### **Applicable Requirements/Procedures:**

DOE Orders 5400.1, 5400.5, 5484.1; NRC License SNM-7; DD-93-04; PR-AP-17.1; QD-AP-6.1; TD-AP-2.0.

### **Input Descriptions:**

1. Data
2. Narratives
3. Site descriptions (i.e. climate, geology, location)

### **Output Descriptions:**

1. Complete report

### **Assumptions:**

1. Annual Site Environmental Report will be required until the end of project.
2. Report will be the last BCLDP document completed.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

*In the following table, for each appropriate labor type enter the # of Persons involved in planning the activity, the # of Days (full or partial) they will be involved, and the total # of person-Hours necessary to plan the work, e.g., 2/5/36*

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	
Technical Advisors	HBTA	
Project Manager/HP Manager	HBPM	
Task Leader	HBTL	
Secretary/Clerical	HBS	
Support Professional	HBP	
Bartlett Health Physics	HRH	

**Estimated Time to Perform the Work:** 608 hours annually

#### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; the PPE/Laundry Group to be used during the performance of the work; and the Total # of Jumps; e.g., 4/20/640 Group 1 160*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			
Manager/Senior Staff	HBB			
Technical Advisors	HBTA			
Project Manager/HP Manager	HBPM			
Task Leader	HBTL			
Battelle Technician	HBT			
Battelle Technician O/T	HBTO			
RAL Staff	HLB	1/Year/100		
Support Professional	HBP	1/Year/240		
Secretary/Clerical	HBS			
Decon Ops Hourly	HBH			
BCO Support	HBCO			
BCO Skilled Laborer	HCE			
BCO Skilled Laborer O/T	HCEO			
BCO Facility Manager	HCF			
Bartlett Technician	HRD	1/Year/80		
Bartlett Maint Specialist	HRDS			
Bartlett Health Physics	HRH	1/Year/180		
Bartlett Admin Support	HRA			

**Subcontract/Purchased Service:** PMP provides duplication and binding services

**Special Equipment/Material:** N/A

**Comments/Explanations:** N/A

**Completed by:** Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3

**Estimator's experience:** 17 years radiochemical and environmental

**BCLDP Experience:** 6 years radioanalytical and environmental monitoring

**Complexity Factor:** It is reasonable to assume that the time required for completion of the SER will reduce as monitoring is reduced. The NRC, however, accepts the SER in lieu of an annual report. Therefore, while the SER environmental data may be reduced, the reporting of work may in fact increase. Should this occur, the decision must be made whether or not BCLDP Environmental Manager should remain the lead on the report.

☒ FY 05 ☒ FY 06 after hot cells are completed through RAL Closure

**WBS Number:** 52

**Activity Number:** 52F

**Activity Title:** Collect Environmental Samples

**Work Package Number:** 52-B05, 52-B06

**Work Package Title:** Environmental Monitoring

**Work Package Description:** Perform sampling/collection of environmental media as required by the BCLDP Environmental Monitoring Plan. All sampling is performed in accordance with BCLDP environmental monitoring procedures.

### Basis of Estimate

**Strategy for Accomplishing Function:** Sampling is accomplished utilizing a schedule based on the calendar year. This includes weekly, monthly, quarterly, semi-annual, and annual sampling.

### Applicable Requirements/Procedures:

DD-98-01; EM-OP-001, 002; EM-SP-001, 002, 003, 004, 005, 006, 007, 008, 009, 011; DD-93-04; HS-AP-5.0; HP-AP-36.0; QD-AP-5.1, 6.1; RL-AP-1.0; TD-AP-2.0.

### Input Descriptions:

1. N/A

### Output Descriptions:

1. Environmental Samples

Sample Type	FY05-06
Alpha Isotopic	74
Gamma Spec	50
Gross Alpha/Beta	309
Radium 226	1
Radium 228	1
Strontium 90	35

### Assumptions:

1. See trigger points under Complexity Factors (page 3)

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### Estimated Resources Required to Plan the Work

*In the following table, for each appropriate labor type enter the # of Persons involved in planning the activity, the # of Days (full or partial) they will be involved, and the total # of person-Hours necessary to plan the work, e.g., 2/5/36*

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	
Technical Advisors	HBTA	
Project Manager/HP Manager	HBPM	
Task Leader	HBTL	
Secretary/Clerical	HBS	
Support Professional	HBP	
Bartlett Health Physics	HRH	

**Estimated Time to Perform the Work:** One year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; the PPE/Laundry Group to be used during the performance of the work; and the Total # of Jumps; e.g., 4/20/640 Group 1 160*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			
Manager/Senior Staff	HBB			
Technical Advisors	HBTA			
Project Manager/HP Manager	HBPM			
Task Leader	HBTL			
Battelle Technician	HBT			
Battelle Technician O/T	HBTO			
RAL Staff	HBL	1/Year/100		
Support Professional	HBP	1/Year/400		
Secretary/Clerical	HBS			
Decon Ops Hourly	HBH			
BCO Support	HBCO			
BCO Skilled Laborer	HCE			
BCO Skilled Laborer O/T	HCEO			
BCO Facility Manager	HCF			
Bartlett Technician	HRD	1/Year/50		
Bartlett Maint Specialist	HRDS			
Bartlett Health Physics	HRH	1/Year/450		
Bartlett Admin Support	HRA			

**Subcontract/Purchased Service:**

**Special Equipment/Material:** N/A



**Comments/Explanations:** N/A

**Completed by:** Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3

**Estimator's experience:** 17 years radiochemical and environmental

**BCLDP Experience:** 6 years radioanalytical and environmental monitoring

**Complexity Factor:** The closure of the JN-1 hot cells will be the initial trigger point for a marked reduction in environmental sampling. The table below describes the proposed reductions based on both IVC closure and interim onsite storage following completion of D&D. These reductions occur in routine sampling activities only. Should the BCLDP move back into S&M mode, BCO environmental management has indicated that more monitoring may be required.

Trigger Point	% Reduction From Previous Trigger Point	% of Current Effort
Current Program	N/A	100
Closure of Hot Cells	74	26
Closure of RAL	22.5	77.5
Post D&D IVC Closure	95	5
Post D&D Interim Storage	30	70

**Attachments**

☒ FY 07 after RAL Closure

WBS Number: 52

Activity Number: 52G

Activity Title: Collect Environmental Samples

Work Package Number: 52-B07

Work Package Title: Environmental Monitoring

**Work Package Description:** Perform sampling/collection of environmental media as required by the BCLDP Environmental Monitoring Plan. All sampling is performed in accordance with BCLDP environmental monitoring procedures.

### Basis of Estimate

**Strategy for Accomplishing Function:** Sampling is accomplished utilizing a schedule based on the calendar year. This includes weekly, monthly, quarterly, semi-annual, and annual sampling.

### Applicable Requirements/Procedures:

DD-98-01; EM-OP-001, 002; EM-SP-001, 002, 003, 004, 005, 006, 007, 008, 009, 011; DD-93-04; HS-AP-5.0; HP-AP-36.0; QD-AP-5.1, 6.1; RL-AP-1.0; TD-AP-2.0.

### Input Descriptions:

1. N/A

### Output Descriptions:

1. Environmental Samples

Sample Type	FY07
Alpha Isotopic	74
Gamma Spec	50
Gross Alpha/Beta	309
Radium 226	1
Radium 228	1
Strontium 90	35

### Assumptions:

1. See trigger points under Complexity Factors (page 3)

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### Estimated Resources Required to Plan the Work

*In the following table, for each appropriate labor type enter the # of Persons involved in planning the activity, the # of Days (full or partial) they will be involved, and the total # of person-Hours necessary to plan the work, e.g., 2/5/36*

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	
Technical Advisors	HBTA	
Project Manager/HP Manager	HBPM	
Task Leader	HBTL	
Secretary/Clerical	HBS	
Support Professional	HBP	
Bartlett Health Physics	HRH	

**Estimated Time to Perform the Work:** One year

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; the PPE/Laundry Group to be used during the performance of the work; and the Total # of Jumps; e.g., 4/20/640 Group 1 160*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			
Manager/Senior Staff	HBB			
Technical Advisors	HBTA			
Project Manager/HP Manager	HBPM			
Task Leader	HBTL			
Battelle Technician	HBT			
Battelle Technician O/T	HBTO			
RAL Staff	HBL	1/Year/100		
Support Professional	HBP	1/Year/300		
Secretary/Clerical	HBS			
Decon Ops Hourly	HBH			
BCO Support	HBCO			
BCO Skilled Laborer	HCE			
BCO Skilled Laborer O/T	HCEO			
BCO Facility Manager	HCF			
Bartlett Technician	HRD			
Bartlett Maint Specialist	HRDS			
Bartlett Health Physics	HRH	1/Year/350		
Bartlett Admin Support	HRA			

**Subcontract/Purchased Service:**

**Special Equipment/Material:** N/A

**Comments/Explanations:** N/A

**Completed by:** Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3

**Estimator's experience:** 17 years in radiochemical analyses and environmental

**BCLDP Experience:** 6 years radioanalytical laboratory and environmental monitoring

**Complexity Factor:** The closure of the JN-1 hot cells will be the initial trigger point for a marked reduction in environmental sampling. The table below describes the proposed reductions based on both IVC closure and interim onsite storage following completion of D&D. These reductions occur in routine sampling activities only. Should the BCLDP move back into S&M mode, BCO environmental management has indicated that more monitoring may be required.

Trigger Point	% Reduction From Previous Trigger Point	% of Current Effort
Current Program	N/A	100
Closure of Hot Cells	74	26
Closure of RAL	22.5	77.5
Post D&D IVC Closure	95	5
Post D&D Interim Storage	30	70

**Attachments**

☒ FY 03 ☒ FY 04

**Until Hot Cells are Gone**

**WBS Number:** 52

**Activity Number:** 52-H

**Activity Title:** West Jefferson Environmental Monitoring – Radioanalytical Lab Support

**Work Package Number:** 52-H03, -H04

**Work Package Title:** Environmental Monitoring

**Work Package Description:** Provide Radioanalytical services in support of the BCLDP environmental monitoring program.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Radioanalytical analyses of environmental samples.

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. Request sample analyses

**Output Descriptions:**

1. Analytical data results reported to clients
2. Quality Control data for instrumentation and analyses

**Assumptions:**

1. See table included in Comments/Explanations with Trigger Point information.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

<b>Labor Type</b>	<b>Code</b>	<b>Persons/Days/Hours</b>
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL	1.1 FTE / 2024 hrs/ year		N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	0.05 FTE / 95 hrs/year		N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH	0.1 FTE / 190 hrs/year		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** N/A

**Special Equipment/Material:** N/A

**Comments/Explanations:**

**Basis of Estimate:**

**Estimator's Experience:** 17 years in radiochemical analyses and environmental

**BCLDP Experience:** 6 years in Radioanalytical Laboratory and environmental monitoring

**Complexity Factor:**

Closure of the JN-1 hot cells will be initial trigger point for marked reduction in environmental sampling. The table below describes the proposed reductions of RAL support. These reductions occur in routine sampling only. Should the BCLDP move back to S&M mode, BCO environmental management has indicated that more monitoring may be required.

Trigger Point	RAL Oversight FTEs Required	% of Current Effort	% Reduction from Previous Trigger Point
Current Program (FY '01)	1.25	N/A	100
Closure of Hot Cells	0.92	74	26

**Completed by:**

Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3

☒ FY 05 ☒ FY 06

**Until Hot Cells are Gone**

**WBS Number:** 52

**Activity Number:** 52-J

**Activity Title:** West Jefferson Environmental Monitoring – Radioanalytical Lab Support

**Work Package Number:** 52-H05, -H06

**Work Package Title:** Environmental Monitoring

**Work Package Description:** Provide Radioanalytical services in support of the BCLDP environmental monitoring program.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Radioanalytical analyses of environmental samples.

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. Request sample analyses

**Output Descriptions:**

1. Analytical data results reported to clients
2. Quality Control data for instrumentation and analyses

**Assumptions:**

1. See table included in Comments/Explanations with Trigger Point information.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

<b>Labor Type</b>	<b>Code</b>	<b>Persons/Days/Hours</b>
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL	0.81 FTE / 1490 hrs/ year		N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	0.04 FTE / 76 hrs/year		N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH	0.07 FTE / 133 hrs/year		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** N/A

**Special Equipment/Material:** N/A

**Comments/Explanations:**

**Basis of Estimate:**

**Estimator's Experience:** 17 years in radiochemical analyses and environmental

**BCLDP Experience:** 6 years in Radioanalytical Laboratory and environmental monitoring

**Complexity Factor:**

Closure of the JN-1 hot cells will be initial trigger point for marked reduction in environmental sampling. The table below describes the proposed reductions of RAL support. These reductions occur in routine sampling only. Should the BCLDP move back to S&M mode, BCO environmental management has indicated that more monitoring may be required.

Trigger Point	RAL Oversight FTEs Required	% of Current Effort	% Reduction from Previous Trigger Point
Current Program (FY '01)	1.25	N/A	100
Closure of Hot Cells	0.92	74	26

**Completed by:** Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3



☒ FY 05 ☒ FY 06

**WBS Number:** 53

**Activity Number:** 53-A

**Activity Title:** DOE Support Service

**Work Package Number:** 53-B05, -B06

**Work Package Title:** DOE Support Services

**Work Package Description:** Provide TLD/Bioassay processing support for DOE-CEMP staff and have available PMP and graphics support on an as-needed basis.

### **Basis of Estimate**

**Strategy for Accomplishing Task:**

**Applicable Requirements/Procedures:**

1. N/A

**Input Descriptions:**

1. N/A

**Output Descriptions:**

1. N/A

**Assumptions:**

1. 4 DOE staff will be covered under the TLD & Bioassay Program
2. Bioassay and TLD unit costs are based on current Battelle use rates

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

N/A

<b>Labor Type</b>	<b>Code</b>	<b>Persons/Days/Hours</b>
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:****Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTOT			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Other Direct Cost:** (4) Bio 1 @ \$296 ea = \$1184, + (4) Bio 2 @ \$351 ea = \$1404  
 , + (16) TLD's 1 ea qtr. For 4 staff @ \$85 ea = \$1,360 Total \$3,948.

**Special Equipment/Material:****Comments/Explanations:****Basis of Estimate:**

What is the estimator's experience? 40 years experience.

What experience is directly related to BCLDP? 7 years of direct BCLDP experience in the Program Planning and Administration Activities

Did we apply a complexity factor during our thought process? Assumed no change from FY01 until close out year.

**Completed by:** Harold Hess

**Date:** 6/11/02

**Rev. No.:** 2

☒ FY 03 ☒ FY 04 ☐ FY 05 ☐ FY 06

**WBS Number:** 53

**Activity Number:** 53B

**Activity Title:** DOE Support Services

**Work Package Number:** 53 -B03, -B04

**Work Package Title:** DOE Support Services

**Work Package Description:** Provide TLD/Bioassay processing support for DOE-CEMP staff and have available PMP and graphics support on an as-needed basis.

### **Basis of Estimate**

**Strategy for Accomplishing Task:**

**Applicable Requirements/Procedures:**

1. N/A

**Input Descriptions:**

1. N/A

**Output Descriptions:**

1. N/A

**Assumptions:**

1. 5 DOE staff will be covered under the TLD & Bioassay Program
2. Bioassay and TLD unit costs are based on current Battelle use rates

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

### **Estimated Resources Required to Plan the Work**

N/A

<b>Labor Type</b>	<b>Code</b>	<b>Persons/Days/Hours</b>
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:****Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Other Direct Cost:** (5) Bio 1 @ \$296 ea = \$1,480, + (5) Bio 2 @\$ ea = \$1,755, + (20) TLD's 1 ea. qtr. For 5 staff @\$85 ea. = \$1,700 Total \$4,935 per year.

**Special Equipment/Material:****Comments/Explanations:****Basis of Estimate:**

**What is the estimator's experience?** 40 years experience.

**What experience is directly related to BCLDP?** 7 years of direct BCLDP experience in the Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** Assumed no change from FY01 until close out year.

**Completed by:** Harold Hess

**Date:** 6/11/02

**Rev. No.:** 2

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06 ☒ FY 07

**WBS Number:** 611

**Activity Number:** 611B

**Activity Title:** Project Management and Administration

**Work Package Number:** 611-B03, -B04, -B05, -B06, -B07

**Work Package Title:** Project Management and Administration

**Work Package Description:** Provide management and administration of the BCLDP consistent with DOE guidance.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Manage, develop, and organize project staff; integrate overall BCLDP activities; conduct periodic project review meetings to determine project status and provide project direction; integrate with all appropriate levels of the DOE to provide status and receive client direction; and establish and maintain the project organization to meet project needs and goals.

#### **Applicable Requirements/Procedures:**

1. DOE guidance

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Weekly meetings with BCLDP staff and CEMP
2. Quarterly DOE Summit meetings
3. Yearly BCLDP management assessment

#### **Assumptions:**

1. Management staff assessment will require 0.05 FTE of the Program Manager (HBA) and 0.05 FTE of secretarial support (HBS) per annum.
2. DOE Support will require 0.2 FTE of the Program Manager (HBA) and 0.1 FTE of secretarial support (HBS) per annum.
3. Interface with BCO for BCLDP will require 0.1 FTE of the Program Manager (HBA) and 0.1 FTE of secretarial support (HBS) per annum.
4. Staff organization/management will require 0.35 FTE of the Program Manager (HBA) and 0.35 FTE of secretarial support (HBS) per annum.
5. HBA will drop to .6 FTE in FY05, .5 in FY06, and .2 in FY07.
6. HBA will drop to .2 FTE in FY07.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work (Assumed 1840 hours per FTE/Year)**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	.7 FTE/year/1,288		N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	.6 FTE/year/1,104		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
Special Project Asst	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** N/A

**Special Equipment/Material:** N/A

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 30 years experience in project planning and control of government projects, primarily DOE projects

**What experience is directly related to BCLDP?** 5 years of direct BCLDP experience managing the Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** Assumed FY02 would be similar to last six months of FY01 then we no longer need the support of the Special Project Assistant. Assume requirements for Program Manager and secretarial support remain constant through the life of the project.

**Completed by:** M. Darnell

**Date:** 6/19/02

**Rev. No.:** 3

☒ FY 03 ☒ FY 04 ☒ FY 05

**WBS Number:** 612

**Activity Number:** 612A

**Activity Title:** Project Administration/Strategic Planning

**Work Package Number:** 612-B03, -B04, -B05

**Work Package Title:** Project Administration Control and Strategic Planning

**Work Package Description:** Manage the overall planning and scheduling of the BCLDP by developing project plans and budgets consistent with the ENG-92 Contract and DOE's letters of direction. DOE also requires organizing, reporting, and controlling the activities and budgets consistent with the BCLDP Project Management System.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Administer BCLDP within DOE's fiscal years' funding guidance.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. Contract Mod 168, Reporting Requirements Checklist
3. Contract Mod 201, DEG Directives for Contract
  - DOE Order 4700.1 – Chapter II, Part B and D; Chapter III, Parts A and F
  - DOE Order 413.1 Management Control System

#### **Input Descriptions:**

1. DOE Funding Guidance and Letters of Direction regarding Baseline, Current Year Work Plans, Strategic Planning etc.

#### **Output Descriptions:**

1. Maintained BCLDP Baseline Plan
2. Current Year Work Plans
3. Monthly Funds Status Reports
4. Monthly Project Management Reports

#### **Assumptions:**

1. DOE Reporting Requirements listed under Applicable Requirements/Procedures and CEMP requested data remains consistent.
2. Maintenance of the baseline and support of alternative cost savings analysis throughout the year would require 35% effort of the Manager of Planning Administration and Control (HBB) per annum.
3. Input to the Monthly Report to CEMP requires 5% effort from the Manager of Planning Administration and Control (HBB) and 5% of secretarial support (HBS) per annum.
4. Attendance at BCLDP Management Meetings and CEMP Weekly Staff Meetings requires an average of 15% involvement of the Manager of Planning Administration and Control (HBB) per annum.
5. Review and incorporation of Contract Modifications would require 10% effort of the Manager of Planning Administration and Control (HBB) per annum.
6. Review and incorporation of Funds Status Changes, tracking, analysis and reporting would require 10% of the effort of the Manager of Planning Administration and Control (HBB) per annum.



7. Support to CEMP and the BCLDP Program Manager to respond to various request for information such as DOE Headquarter request for data, OFO Mid-Year and Summit Presentations requires 5% of the effort of the Manager of Planning Administration and Control (HBB) support per annum.

**Estimated Time to Plan the Work (Including Review and Approval): N/A**

**Estimated Resources Required to Plan the Work**

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work (Assumed 1840 Hours / FTE/Year)**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	.7 FTE/year/ 1288 hours		N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	.05 FTE/year/ 92 hours		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
BCO Tech Editor	HBCT			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service: N/A**

**Special Equipment/Material: N/A**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 30 years experience in project planning and control of government projects, primarily DOE projects

**What experience is directly related to BCLDP?** 5 years of direct BCLDP experience managing the Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** I assumed reduction in detailed baseline planning activities, subcontract and purchasing activities requiring support from the Program Planning and Control (PAC) Staff. I further assumed, after the start of JN1 demolition, we will have even fewer subcontracts, although the demolition subcontracts will be large, I assumed they will require less involvement from (PAC); In the final 12 months before Contract Close-Out, we will require additional staff in PAC to finalize project records, property, accounting, etc. See attached Assumptions chart of activities and percent of time required.

**Completed by:** C. Theibert / S. Rank

**Date:** 6/11/02

**Rev. No.:** 2

☒ **FY 06 after completion of Buildings Demolition to contract closeout**

**WBS Number:** 612

**Activity Number:** 612C

**Activity Title:** Project Administration/Strategic Planning

**Work Package Number:** 612-B06

**Work Package Title:** Project Administration Control Strategic Planning

**Work Package Description:** Manage the overall planning and scheduling of the BCLDP by developing project plans and budgets consistent with the ENG-92 Contract and DOE's letters of direction. DOE also requires organizing, reporting, and controlling the activities and budgets consistent with the BCLDP Project Management System.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Administer BCLDP within DOE's fiscal years' funding guidance and close out contract.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. Contract Mod 168, Reporting Requirements Checklist
3. Contract Mod 201, DEG Directives for Contract  
DOE Order 4700.1 – Chapter II, Part B and D; Chapter III, Parts A and F  
DOE Order 413.1 Management Control System

#### **Input Descriptions:**

1. DOE Funding Guidance and Letters of Direction.

#### **Output Descriptions:**

1. Monthly Funds Status Reports
2. Monthly Project Management Reports
3. Final Closeout and Funds Reconciliation Reports

#### **Assumptions:**

1. DOE Reporting Requirements listed under Applicable Requirements/Procedures and CEMP requested data remains consistent.
2. Input to the Monthly Report to CEMP requires 5% of effort from the Manager of Planning Administration and Control (HBB) and 5% of secretarial support (HBS).
3. Attendance at BCLDP Management Meetings and CEMP Weekly Staff Meetings requires an average of 5% involvement per month of the Manager of Planning Administration and Control (HBB).
4. Review and incorporation of Contract Modifications and close out of all remaining contract issues would require 5% of the effort of the Manager of Planning Administration and Control (HBB).
5. Review and incorporation of Funds Status Changes, tracking, analysis and reporting including closeout of all funding items between DOE, Battelle and other DOE components (such as waste receivers) would require 5% of the effort of the Manager of Planning Administration and Control (HBB).
6. Support to CEMP and the BCLDP Program Manager to respond to various request for information such as DOE Headquarter request for data, History Close Out reports, OFO Mid-Year and Summit

Presentations requires 10% of the effort of the Manager of Planning Administration and Control (HBB).

7. Manage close out audit for contract including final reconciliation of funds and invoices, for Battelle, subcontractors, and purchased services and assisting in staff retention/placement would require 20% of the effort of the Manager of Planning Administration and Control (HBB).

**Estimated Time to Plan the Work (Including Review and Approval): N/A**

**Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work (Assumed 1840 Hours / FTE/Year)**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	.5 FTE/ year/ 920 hours		N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	.05 FTE/ year/92 hours		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** N/A

**Special Equipment/Material:** N/A

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 23 years experience in project planning and control of government projects, primarily DOE projects

**What experience is directly related to BCLDP?** 5 years of direct BCLDP experience working in Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** I assumed reduction in detailed baseline planning activities, subcontract and purchasing activities requiring support from the Program Planning and Control (PAC) Staff. I further assumed, after the start of JN1 demolition, we will have even fewer subcontracts, although the demolition subcontracts will be large, I assumed they will require less involvement from (PAC); In the final 12 months before Contract Close-Out, we will require additional staff in PAC to finalize project records, property, accounting, etc. See attached Assumptions chart of activities and percent of time required.

**Completed by:** C. Theibert / S. Rank

**Date:** 6/11/02

**Rev. No.:** 2

☒ FY 03 ☒ FY 04 up to the start of JN1 Demolition

**WBS Number:** 613

**Activity Number:** 613A

**Activity Title:** Project Administration Control Cost Control/Scheduling/Estimating

**Work Package Number:** 613-A03, -A04

**Work Package Title:** Project Administration Control Cost Control/Scheduling/Estimating

**Work Package Description:** Provide cost and schedule data in a timely manner. Maintain BCLDP cost and schedule data in Open Plan and MPM Systems. Also provide Short-Interval-Scheduling (SIS) support during work instruction formulation and monitoring/updating/revising status and scope during implementation. Provide material identification and support to purchasing field services for future requirements and needs.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Analyze all monthly performance measurement data and prepare reports to include all items specified on reporting requirements checklist. SIS provides on location at West Jeff daily level schedules and estimates to support technical staff in planning and performing their work, while also summarizing to activities that are used to track monthly performance and forecast.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. Contract Mod 168, Reporting Requirements Checklist
3. Contract Mod 201, DEG Directives for Contract  
DOE Order 4700.1 – Chapter II, Part B and D; Chapter III, Parts A and F  
DOE Order 413.1 Management Control System
4. Variance Analysis Thresholds ; Letter from Mr. Thomas A. Baillieul to Mr. V. Edward Castleberry, dated August 22, 1994

#### **Input Descriptions:**

1. Battelle Financial Reporting System including Management Reporting System, Electronic Timecard System, Procurement Systems, Accounts Payable, Accounts Receivable, etc.
2. Input from BCLDP Technical Managers regarding planning, scheduling, budgeting, performance reporting, forecasting, etc.

#### **Output Descriptions:**

1. Monthly Cost Management Reports
2. Milestone Schedule Status
3. Variance Analysis
4. Invoices to CEMP
5. Preparation of Package Change Requests as required
6. Management Reserve Logs
7. Quarterly Contractor Employment Report
8. Administration of Yearly Property Audit
9. WBS Structure and Dictionary
10. Short-Interval-Schedules and status

#### **Assumptions:**

1. DOE Reporting Requirements listed under Applicable Requirements/Procedures and CEMP requested data remains consistent.
2. Maintenance of BCLDP Baseline, Support planning "what if" exercises analyzing work activities scope and sequencing, preparation of Package Change Request and the Current Year Work Plans requires 40% effort by Senior Schedule Specialist (Technical Advisor) and 30% effort by Cost Specialist (Support Professional) per annum.
3. Input to the Monthly Report to CEMP requires 30% effort from the Senior Scheduling Specialist (Technical Advisor) to prepare Milestone Schedule Reports, Milestone Logs and Variance Analysis and 20% effort from a Cost Specialist (Support Professional) to prepare all financial reports including the Cost Management Report, Management Reserve Log, and Cost Performance Reports per annum.
4. Monthly meetings with BCLDP Technical Staff to collect performance information and forecast estimate to complete at the activity level for the project requires 20% effort of the Senior Schedule Specialist (Technical Advisor) per annum.
5. Audit of accounting records and preparation of Invoices to DOE every two weeks by B&R code requires 10% effort by Cost Specialist (Support Professional) per annum.
6. Audit of the Prime Subcontractors, time cards, distribution to technical managers for review and resolution of discrepancies requires 10% effort by Cost Specialist (Support Professional) per annum.
7. Government Property Control and management of yearly property audit requires 20% effort by Cost Specialist (Support Professional) per annum.
8. Purchase Order preparation, audits, and tracking requires 20% effort by Cost Specialist (Support Professional) per annum.
9. Accounting Reviews, audits and corrective actions requires 30% effort by Cost Specialist (Support Professional) per annum.
10. Maintenance of Open Plan Scheduling and Networking System for the BCLDP Project requires 10 % effort by Senior Scheduling Specialist (Technical Advisor) per annum.
11. Maintenance of Microframe Project Manager (MPM) project management system integrating cost, schedule, scope and performance information requires 10% of Cost Specialist (Support Professional) per annum.
12. Short-Interval-Scheduler (SIS) creating schedules and materials requirements requires 100% effort by a Support Professional (HBP).

**Estimated Time to Plan the Work (Including Review and Approval): N/A**

**Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year.

### Estimated Resources Required to Perform the Work (Assumed 1840 Hours / FTE/Year)

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	1 FTE/ year/1,840 hours		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP	2.5 FTE/ year/ 4,600 hours		N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** N/A

**Special Equipment/Material:** N/A

**Comments/Explanations:**

#### Basis of Estimate:

**What is the estimator's experience?** 23 years experience in project planning and control of government projects, primarily DOE projects

**What experience is directly related to BCLDP?** 10 years of direct BCLDP experience working in Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** I assumed reduction in detailed baseline planning activities, subcontract and purchasing activities requiring support from the Program Planning and Control (PAC) Staff. I further assumed, after the start of JN1 demolition, we will have even fewer subcontracts, although the demolition subcontracts will be large, I assumed they will require less involvement from (PAC); In the final 12 months before Contract Close-Out, we will require additional staff in PAC to finalize project records, property, accounting, etc. See attached Assumptions chart of activities and percent of time required.

**Completed by:** C. Theibert / S. Rank

**Date:** 6/11/02

**Rev. No.:** 2



☒ FY 05   ☒ FY 06   **Start of JN1 Demolition up to final 12 months of contract**

**WBS Number:** 613

**Activity Number:** 613B

**Activity Title:** Project Administration Control Cost Control/Scheduling/Estimating

**Work Package Number:** 613-A05, -A06

**Work Package Title:** Project Administration Control Cost Control/Scheduling/Estimating

**Work Package Description:** Provide cost and schedule data in a timely manner. Maintain BCLDP cost and schedule data in Open Plan and MPM Systems. Also provide Short-Interval-Scheduling (SIS) support during work instruction formulation and monitoring/updating/revising status and scope during implementation. Provide material identification and support to purchasing field services for future requirements and needs.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Analyze all monthly performance measurement data and prepare reports to include all items specified on reporting requirements checklist. SIS provides on location at West Jeff daily level schedules and estimates to support technical staff in planning and performing their work, while also summarizing to activities that are used to track monthly performance and forecast.

### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. Contract Mod 168, Reporting Requirements Checklist
3. Contract Mod 201, DEG Directives for Contract  
    DOE Order 4700.1 – Chapter II, Part B and D; Chapter III, Parts A and F  
    DOE Order 413.1 Management Control System
4. Variance Analysis Thresholds ; Letter from Mr. Thomas A. Baillieul to Mr. V. Edward Castleberry, dated August 22, 1994

### **Input Descriptions:**

1. Battelle Financial Reporting System including Management Reporting System, Electronic Timecard System, Procurement Systems, Accounts Payable, Accounts Receivable, etc.
2. Input from BCLDP Technical Managers regarding planning, scheduling, budgeting, performance reporting, forecasting, etc.

### **Output Descriptions:**

1. Monthly Cost Management Reports
2. Milestone Schedule Status
3. Variance Analysis
4. Invoices to CEMP
5. Preparation of Package Change Requests as required
6. Management Reserve Logs
7. Quarterly Contractor Employment Report
8. Administration of Yearly Property Audit
9. WBS Structure and Dictionary
10. Short-Interval-Schedules

**Assumptions:**

1. DOE Reporting Requirements listed under Applicable Requirements/Procedures and CEMP requested data remains consistent.
2. Maintenance of BCLDP Baseline, Support planning "what if" exercises analyzing work activities scope and sequencing, preparation of Package Change Request and the Current Year Work Plans requires 30% effort by Senior Schedule Specialist (Technical Advisor) and 10% effort by Cost Specialist (Support Professional) per annum. Senior Schedule Specialist requires only 10% effort in FY06.
3. Input to the Monthly Report to CEMP requires 30% effort from the Senior Scheduling Specialist (Technical Advisor) to prepare Milestone Schedule Reports, Milestone Logs and Variance Analysis and 10% effort from a Cost Specialist (Support Professional) to prepare all financial reports including the Cost Management Report, Management Reserve Log, and Cost Performance Reports per annum.
4. Monthly meetings with BCLDP Technical Staff to collect performance information and forecast estimate to complete at the activity level for the project requires 10% effort of the Senior Schedule Specialist (Technical Advisor) per annum.
5. Audit of accounting records and preparation of Invoices to DOE every two weeks by B&R code requires 10% effort by Cost Specialist (Support Professional) per annum.
6. Audit of the Prime Subcontractors, time cards, distribution to technical managers for review and resolution of discrepancies requires 10% effort by Cost Specialist (Support Professional) per annum.
7. Government Property Control and management of yearly property audit requires 10% effort by Cost Specialist (Support Professional) per annum.
8. Purchase Order preparation, audits, and tracking requires 10% effort by Cost Specialist (Support Professional) per annum.
9. Accounting Reviews, audits and corrective actions requires 10% effort by Cost Specialist (Support Professional) per annum.
10. Maintenance of Open Plan Scheduling and Networking System for the BCLDP Project requires 10 % effort by Senior Scheduling Specialist (Technical Advisor) per annum.
11. Maintenance of Microframe Project Manager (MPM) project management system integrating cost, schedule, scope and performance information requires 10% of Cost Specialist (Support Professional) per annum.
12. Short-Interval-Scheduler (SIS) creating schedules and materials requirements requires 50% effort by a Support Professional (HBP).

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year.

### Estimated Resources Required to Perform the Work (Assumed 1840 Hours / FTE/Year)

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	.8 FTE/ year/1,472 hours	.6 / 1104 in FY06	N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP	1.3 FTE/ year/ 2,392 hours		N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** N/A

**Special Equipment/Material:** N/A

**Comments/Explanations:**

#### Basis of Estimate:

**What is the estimator's experience?** 23 years experience in project planning and control of government projects, primarily DOE projects

**What experience is directly related to BCLDP?** 10 years of direct BCLDP experience managing the Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** I assumed reduction in detailed baseline planning activities, subcontract and purchasing activities requiring support from the Program Planning and Control (PAC) Staff. I further assumed, after the start of JN1 demolition, we will have even fewer subcontracts, although the demolition subcontracts will be large, I assumed they will require less involvement from (PAC); In the final 12 months before Contract Close-Out, we will require additional staff in PAC to finalize project records, property, accounting, etc. See attached Assumptions chart of activities and percent of time required.

**Completed by:** C. Theibert

**Date:** 5/15/01

**Rev. No.:** 1

**☒ FY 07 Final 12 months - Contract Close Out**

**WBS Number:** 613

**Activity Number:** 613C

**Activity Title:** Project Administration Control Cost Control/Scheduling/Estimating

**Work Package Number:** 613-A07

**Work Package Title:** Project Administration Control Cost Control/Scheduling/Estimating

**Work Package Description:** Provide cost and schedule data in a timely manner. Maintain BCLDP cost and schedule data in Open Plan and MPM Systems.

**Basis of Estimate**

**Strategy for Accomplishing Task:** Analyze all monthly performance measurement data and prepare reports to include all items specified on reporting requirements checklist.

**Applicable Requirements/Procedures:**

1. Contract statement of work
2. Contract Mod 168, Reporting Requirements Checklist
3. Contract Mod 201, DEG Directives for Contract  
DOE Order 4700.1 – Chapter II, Part B and D; Chapter III, Parts A and F  
DOE Order 413.1 Management Control System
4. Variance Analysis Thresholds ; Letter from Thomas A. Baillieul to Mr. V. Edward Castleberry, dated August 22, 1994

**Input Descriptions:**

1. Battelle Financial Reporting System including Management Reporting System, Electronic Timecard System, Procurement Systems, Accounts Payable, Accounts Receivable, etc.
2. Input from BCLDP Technical Managers regarding planning, scheduling, budgeting, performance reporting, forecasting, etc.

**Output Descriptions:**

1. Monthly Cost Management Reports
2. Milestone Schedule Status
3. Variance Analysis
4. Invoices to CEMP
5. Preparation of Package Change Requests as required
6. Management Reserve Logs
7. Quarterly Contractor Employment Report
8. Administration of Yearly Property Audit
9. WBS Structure and Dictionary
10. Contract Closeout Financial Reports

**Assumptions:**

1. DOE Reporting Requirements listed under Applicable Requirements/Procedures and CEMP requested data remains consistent.

2. Maintenance of BCLDP Baseline, and preparation of Package Change Request requires 5% effort by Senior Schedule Specialist (Technical Advisor) and 5% effort by Cost Specialist (Support Professional) per annum.
3. Input to the Monthly Report to CEMP requires 10% effort from the Senior Scheduling Specialist (Technical Advisor) to prepare Milestone Schedule Reports, Milestone Logs and Variance Analysis and 10% effort from a Cost Specialist (Support Professional) to prepare all financial reports including the Cost Management Report, Management Reserve Log, and Cost Performance Reports per annum.
4. Monthly meetings with BCLDP Technical Staff to collect performance information and forecast estimate to complete at the activity level for the project requires 10% effort of the Senior Schedule Specialist (Technical Advisor) per annum.
5. Audit of accounting records and preparation of Invoices to DOE every two weeks by B&R code requires 10% effort by Cost Specialist (Support Professional) per annum.
6. Audit of the Prime Subcontractors, time cards, distribution to technical managers for review and resolution of discrepancies requires 10% effort by Cost Specialist (Support Professional) per annum.
7. Government Property Control and management of yearly property audit requires 30% effort by Cost Specialist (Support Professional) per annum.
8. Purchase Order preparation, audits, and tracking requires 10% effort by Cost Specialist (Support Professional) per annum.
9. Final accounting reviews, and close out audits require 100% by Cost Specialist (Support Professional) and 15% effort by Senior Schedule Specialist (Technical Advisor), to track waste shipment accounting per annum.
10. Maintenance of Open Plan Scheduling and Networking System for the BCLDP Project requires 10 % effort by Senior Scheduling Specialist (Technical Advisor) per annum.
11. Maintenance of Microframe Project Manager (MPM) project management system integrating cost, schedule, scope and performance information requires 10% of Cost Specialist (Support Professional) per annum.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year.

**Estimated Resources Required to Perform the Work (Assumed 1840 Hours / FTE/Year)**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	.3 FTE/ year/552 hours		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP	1.00 FTE/ year/1,840 hours		N/A
Secretary/Clerical	HBS	0.05/yr/92		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** N/A

**Special Equipment/Material:** N/A

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 30 years experience in project planning and control of government projects, primarily DOE projects

**What experience is directly related to BCLDP?** 5 years of direct BCLDP experience managing the Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** I assumed reduction in detailed baseline planning activities, subcontract and purchasing activities requiring support from the Program Planning and Control (PAC) Staff. I further assumed, after the start of JN1 demolition, we will have even fewer subcontracts, although the demolition subcontracts will be large, I assumed they will require less involvement from (PAC); In the final 12 months before Contract Close-Out, we will require additional staff in PAC to finalize project records, property, accounting, etc. See attached Assumptions chart of activities and percent of time required.

**Completed by:** M. Darnell

**Date:** 5/15/01

**Rev. No.:** 1

☒ FY 03   ☒ FY 04   up to the start of JN1 Demolition

**WBS Number:** 613

**Activity Number:** 613D

**Activity Title:** Purchasing Field Resources Support

**Work Package Number:** 613-E03, -E04

**Work Package Title:** Purchasing field Resources

**Work Package Description:** Provides procurement of materials, equipment and field supplies for the BCLDP Project at the West Jefferson site.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Maintain Supply Trailer on Site. Ensure current inventory of supplies, materials and equipment is adequate and available so there are no shortages that might affect work performed in the field. Physically shop for special procurements, materials or equipment if needed on an emergency basis.

#### **Applicable Requirements/Procedures:**

1. BCLDP Purchasing System

#### **Input Descriptions:**

1. Purchase Requisitions from technical staff

#### **Output Descriptions:**

1. Physical equipment and materials required in the field.

#### **Assumptions:**

1. Staffing and activity requirements will remain unchanged until the last year of the project.
2. D&D Field Resources Specialist (HBP) 75% and 15% secretarial support (HBS) to manage purchase orders, purchase card request, review accounting, audit invoices, approve subcontract invoices, and insure correct charges consistent with Battelle's Purchasing System.
3. D&D Field Resources Specialist (HBP) 10% to support audit of all working government equipment.
4. D&D Field Resources Specialist (HBP) 15% to staff supply trailer, responsible for receiving and distribution of equipment and supplies, maintain real time inventory of all supplies and materials.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year constant until the last year of the project.

**Estimated Resources Required to Perform the Work (Assumed 1840 Hours / FTE)**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP	1 /year/ 1840		N/A
Secretary/Clerical	HBS	1 /year/ 276		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items anticipated. Cost of purchases is under work packages where the item is used in support of the technical activity.

**Special Equipment/Material:** No extraordinary items anticipated.

**Comments/Explanations:**



**Basis of Estimate:**

**What is the estimator's experience?** 23 years experience in project planning and control of government projects, primarily DOE projects

**What experience is directly related to BCLDP?** 10 years of direct BCLDP experience working in Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** I assumed reduction in purchasing activities requiring support from the Program Planning and Control (PAC) Staff. I further assumed, after the start of JN1 demolition, we will have even fewer subcontracts, although the demolition subcontracts will be large, I assumed they will require less involvement from (PAC); In the final 12 months before Contract Close-Out, we will require additional staff in PAC to finalize project records, property, accounting, etc. See attached Assumptions chart of activities and percent of time required.

**Completed by:** C. Theibert / S. Rank

**Date:** 6/11/02

**Rev. No.:** 2

☒ **FY 05 Start of JN1 Demolition through completion**

**WBS Number:** 613

**Activity Number:** 613 E

**Activity Title:** Purchasing Field Resources Support

**Work Package Number:** 613-E05

**Work Package Title:** Purchasing field Resources

**Work Package Description:** Provides procurement of materials, equipment and field supplies for the BCLDP Project at the West Jefferson site.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Maintain Supply Trailer on Site. Ensure current inventory of supplies, materials and equipment is adequate and available so there are no shortages that might affect work performed in the field. Physically shop for special procurements, materials or equipment if needed on an emergency basis.

#### **Applicable Requirements/Procedures:**

1. BCLDP Purchasing System

#### **Input Descriptions:**

1. Purchase Requisitions from technical staff

#### **Output Descriptions:**

1. Physical equipment and materials required in the field.

#### **Assumptions:**

1. Staffing and activity requirements will remain unchanged until the last year of the project.
2. D&D Field Resources Specialist (HBP) 30% and 5% secretarial support (HBS) to manage purchase orders, purchase card request, review accounting, audit invoices, approve subcontract invoices, and insure correct charges consistent with Battelle's Purchasing System.
3. D&D Field Resources Specialist (HBP) 10% to support audit of all working government equipment.
4. D&D Field Resources Specialist (HBP) 10% to staff supply trailer, responsible for receiving and distribution of equipment and supplies, maintain real time inventory of all supplies and materials.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year constant until the last year of the project.

**Estimated Resources Required to Perform the Work (Assumed 1840 Hours / FTE)**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP	.5 /year/ 920		N/A
Secretary/Clerical	HBS	.05 /year/ 92		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items anticipated. Cost of purchases is under work packages where the item is used in support of the technical activity.

**Special Equipment/Material:** No extraordinary items anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 23 years experience in project planning and control of government projects, primarily DOE projects

**What experience is directly related to BCLDP?** 10 years of direct BCLDP experience managing the Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** I assumed reduction in purchasing activities requiring support from the Program Planning and Control (PAC) Staff. I further assumed, after the start of JN1 demolition, we will have even fewer subcontracts, although the demolition subcontracts will be large, I assumed they will require less involvement from (PAC); In the final 12 months before Contract Close-Out, we will require additional staff in PAC to finalize project records, property, accounting, etc. See attached Assumptions chart of activities and percent of time required.

**Completed by:** C. Theibert / S. Rank

**Date:** 6/11/02 **Rev. No.:** 2

☒ FY06

**WBS Number:** 613

**Activity Number:** 613F

**Activity Title:** Purchasing Field Resources Support

**Work Package Number:** 613-E06

**Work Package Title:** Purchasing Field Resources

**Work Package Description:** Support field operations and provides close-out inventory and documentation of materials, equipment and field supplies for the BCLDP Project at the West Jefferson site.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Ensure current inventory of supplies, materials and equipment is adequate and available so there are no shortages that might affect work performed in the field. Physically shop for special procurements, materials or equipment if needed on an emergency basis. Lead close-out activities including final audits and transfer of government furnished equipment.

### **Applicable Requirements/Procedures:**

1. BCLDP Purchasing System

### **Input Descriptions:**

1. Purchase Requisitions from technical staff

### **Output Descriptions:**

1. Physical equipment and materials required in the field.
2. Final government inventory list.
3. Disposition of any remaining government property.

### **Assumptions:**

1. Staffing and activity requirements will remain unchanged until the last year of the project.
2. D&D Field Resources Specialist (HBP) 10% to manage purchase orders, purchase card request, review accounting, audit invoices, approve subcontract invoices, and insure correct charges consistent with Battelle's Purchasing System.
3. D&D Field Resources Specialist (HBP) 30% to support audit and disposition of all remaining government equipment.
4. D&D Field Resources Specialist (HBP) 10% for receiving and distribution of equipment and supplies, maintain real time inventory of all supplies and materials.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year constant until the last year of the project.

**Estimated Resources Required to Perform the Work (Assumed 1840 Hours / FTE)**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP	1 /year/ 920		N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items anticipated. Cost of purchases is under work packages where the item is used in support of the technical activity.

**Special Equipment/Material:** No extraordinary items anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 23 years experience in project planning and control of government projects, primarily DOE projects

**What experience is directly related to BCLDP?** 10 years of direct BCLDP experience working in Program Planning and Administration Activities

**Did we apply a complexity factor during our thought process?** I assumed reduction in purchasing activities requiring support from the Program Planning and Control (PAC) Staff. I further assumed, after the start of JN1 demolition, we will have even fewer subcontracts, although the demolition subcontracts will be large, I assumed they will require less involvement from (PAC); In the final 12 months before Contract Close-Out, we will require additional staff in PAC to finalize project records, property, accounting, etc. See attached Assumptions chart of activities and percent of time required.

**Completed by:** C. Theibert / S. Rank

**Date:** 6/11/02

**Rev. No.:** 3

☒ FY 03 ☒ FY 04

## 2003 to Start of Demolition of JN-1

**WBS Number:** 613

**Activity Number:** 613G

**Activity Title:** Project Records Management/Document Control

**Work Package Number:** 613-B03, -B04

**Work Package Title:** Project Records Management/Document Control

**Work Package Description:** Establish and maintain an effective and efficient records retention and document control system. The Project Records Management System (PRMS) is designed for the collection, identification, control, and preservation of quality documents and records, and data generated in the performance of DDO activities.

### Basis of Estimate

**Strategy for Accomplishing Task:** Assure reliable retention of project records and controlled documents, including physical retention and indexing of such records.

#### Applicable Requirements/Procedures:

1. Contract statement of work
2. DOE 414.1 Quality Assurance
3. DD-MN-01 DDO Quality Manual
4. PR-AP-17.1 Operation of the Project Records Management System (PRMS)
5. QD-AP-06.1 Document Control

#### Input Descriptions:

1. N/A

#### Output Descriptions:

1. Organized, dual secure storage system for retention and preservation of project records
2. Duplication and distribution of project procedures and plans to controlled manuals
3. Issuance of updates of procedures and forms indexes
4. Up-to-date electronic files of procedures and forms
5. Microfilm copies of past records

#### Assumptions:

1. BCLDP Project Records staff will continue to support BCO ESH&Q Document Control.
2. A West Jeff secretary will continue to issue work instructions at West Jeff and maintain controlled manuals in the Technical Library.
3. Project Records will be microfilmed annually but training records and document control records will not be microfilmed until the end of the project.
4. As project milestones are met (e.g. start demolition of JN-1) the workload in Project Records will decrease and remain flat until the end of the project.
5. At the end point of the project, the workload for Project Records will increase.



**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	1/.../1105		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	2/.../1289		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

Microfilming Costs per year - \$5000.00 (Assuming we don't microfilm training or document control records each year along with the project records)

**Special Equipment/Material:**

Other Direct Costs – PMP Services \$15,000.00 a year.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 32 years experience in general record keeping as an administrator, instructor, and manager within various educational systems and on government projects.

**What experience is directly related to BCLDP?** 9 years of direct BCLDP experience including 6 years managing the Project Records/Document Control System

**Did we apply a complexity factor during our thought process?** Due to reduced funding, I assumed a reduction in work and records produced for FY2002 until start-up of the demolition of JN-1. At start-up, I assumed a further reduction in work and records produced until the end point of the project at which time the workload in Project Records would increase.

**Completed by:** Ruth Baruth

**Date:** 6/07/02

**Rev. No.:** 1

**WBS 613**  
**Project Records Management/Document Control**

**2002 to Start of Demolition of JN-1**

<b>Code</b>	<b>Persons/Hours</b>	
HBTA	1/1105	
HBS	2/1289	(1/1105 and 1/184)
Others		

HBTA – Baruth  
HBS – James, Knight

**Coordination of Project Records Management System (PRMS)**

1. Manage the collection, identification, control, and retrieval of records including the maintenance of PRMS operating procedures. (20%)
2. Maintain a searchable database of needed records. (10%)
3. Coordinate the microfilming of records. (20%)
4. Coordinate the issuing of new and revised controlled documents, forms, and field changes.(30%)
5. Maintain and issue an index of all active documents including work instructions.(10%)
6. Implement a monthly assessment process of plans and procedures. (10%)

**Administrative Support**

1. Assist in collecting, sorting, and retrieving project records submitted by staff.
2. Enter data bi-weekly into a records database and issue reports to managers.
3. Maintain accurate and complete files in dual locations of all records.
4. Assemble, distribute, & maintain distribution lists for controlled documents; send delinquency notices
5. Duplicate and distribute new procedures, revisions, and field changes to controlled manuals.
6. Assist in preparing records for microfilming.

**WBS 613**  
Project Records Management/Document Control

<b>Coordination of Project Records Management System</b>	<b>HBTB (1105 hrs)</b>
1. Manage the collection, identification, control, and retrieval of records including maintenance of PRMS operating procedures	20%
2. Maintain a searchable database of needed records	10%
3. Coordinate the microfilming of records	20%
4. Coordinate the issuing of controlled documents, forms, & field changes	30%
5. Maintain/issue an index of all active documents including work instructions	10%
6. Implement a monthly assessment process of plans and procedures	10%
<b>TOTAL</b>	<b>100%</b>

<b>Administrative Support</b>	<b>HBS-1 (1105 hrs)</b>	<b>HBS-2 (184 hrs)</b>	<b>Temp</b>
1. Assist in collecting, sorting, and retrieving records	5%		
2. Enter data bi-weekly into a database and issue reports	30%		
3. Maintain accurate/complete files in dual locations of all records	10%		
4. Assemble, distribute, and maintain distribution lists for controlled documents	5%		
5. Duplicate and distribute new plans, procedures, work instructions, revisions, and field changes; send delinquency notices	45%	100%	
6. Assist in preparing records for microfilming	5%		
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	

Microfilming - \$5000.00 a year

PMP costs - \$15,000.00 a year

6/07/01  
Rev. 1 of 613G

☒ FY 06 ☐ FY 07

## **JN-1 Demolition to end of Project**

**WBS Number:** 613

**Activity Number:** 613H

**Activity Title:** Project Records Management/Document Control

**Work Package Number:** 613-B06, B07

**Work Package Title:** Project Records Management/Document Control

**Work Package Description:** Establish and maintain an effective and efficient records retention and document control system. The Project Records Management System (PRMS) is designed for the collection, identification, control, and preservation of quality documents and records, and data generated in the performance of DDO activities.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Assure reliable retention of project records and controlled documents, including physical retention and indexing of such records.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. DOE 414.1 Quality Assurance
3. DD-MN-01 DDO Quality Manual
4. PR-AP-17.1 Operation of the Project Records Management System (PRMS)
5. QD-AP-06.1 Document Control

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Organized, dual secure storage system for retention and preservation of project records
2. Duplication and distribution of project procedures and plans to controlled manuals
3. Issuance of updates of procedures and forms indexes
4. Up-to-date electronic files of procedures and forms
5. Microfilm copies of past records

#### **Assumptions:**

1. BCLDP Project Records staff will continue to support BCO ESH&Q Document Control.
2. A West Jeff secretary will continue to issue work instructions at West Jeff and maintain controlled manuals in the Technical Library.
3. Project Records will be microfilmed annually but training records and document control records will not be microfilmed until the end of the project.
4. As project milestones are met (e.g. start demolition of JN-1) the workload in Project Records will decrease and remain flat until the end of the project.
5. At the end point of the project, the workload for Project Records will increase.

**Estimated Time to Plan the Work (Including Review and Approval): N/A**

**Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	1/.../920		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	1/...920		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

Microfilming Costs per year - \$6,424.00 (Assuming we don't microfilm training or doc. control records each year along with the project records)

**Special Equipment/Material:**

**Comments/Explanations:** Other Direct Cost - PMP costs - \$3,800/yr.

**Basis of Estimate:**

**What is the estimator's experience?** 32 years experience in general record keeping as an administrator, instructor, and manager within various educational systems and on government projects.

**What experience is directly related to BCLDP?** 9 years of direct BCLDP experience including 6 years managing the Project Records/Document Control System

**Did we apply a complexity factor during our thought process?** Due to reduced funding, I assumed a reduction in work and records produced for FY2002 until start-up of the demolition of JN-1. At start-up, I assumed a further reduction in work and records produced until the end point of the project at which time the workload in Project Records would increase.

**Completed by:** Ruth Baruth

**Date:** 6/07/02

**Rev. No.:** 1

**WBS 613**  
**Project Records Management/Document Control**  
**Mid Point of the Project**

<b>Code</b>	<b>Persons/Hours</b>
HBTA	1/920
HBS	1/920
Others	

HBTA – Baruth  
HBS – James

**Coordination of Project Records Management System (PRMS)**

1. Manage the collection, identification, control, and retrieval of records including the maintenance of PRMS operating procedures. (20%)
2. Maintain a searchable database of needed records. (10%)
3. Coordinate the microfilming of records. (20%)
4. Coordinate the issuing of new and revised controlled documents, forms, and field changes.(30%)
5. Maintain and issue an index of all active documents including work instructions.(10%)
6. Implement a monthly assessment process of plans and procedures. (10%)

**Administrative Support**

1. Assist in collecting, sorting, and retrieving project records submitted by staff.
2. Enter data bi-weekly into a records database and issue reports to managers.
3. Maintain accurate and complete files in dual locations of all records.
4. Assemble, distribute, & maintain distribution lists for controlled documents; send delinquency notices
5. Duplicate and distribute new procedures, revisions, and field changes to controlled manuals.
6. Assist in preparing records for microfilming.



**WBS 613**  
Project Records Management/Document Control

<b>Coordination of Project Records Management System</b>	<b>HBTA (920 hrs)</b>
1. Manage the collection, identification, control, and retrieval of records including maintenance of PRMS operating procedures	20%
2. Maintain a searchable database of needed records	10%
3. Coordinate the microfilming of records	20%
4. Coordinate the issuing of controlled documents, forms, & field changes	30%
5. Maintain/issue an index of all active documents including work instructions	10%
6. Implement a monthly assessment process of plans and procedures	10%
<b>TOTAL</b>	<b>100%</b>

<b>Administrative Support</b>	<b>HBS-1 (920 hrs)</b>
1. Assist in collecting, sorting, and retrieving records	5%
2. Enter data bi-weekly into a database and issue reports	30%
3. Maintain accurate/complete files in dual locations of all records	10%
4. Assemble, distribute, and maintain distribution lists for controlled documents	5%
5. Duplicate and distribute new procedures, revisions, and field changes to controlled manuals; send delinquency notices	45%
6. Assist in preparing records for microfilming	5%
<b>TOTAL</b>	<b>100%</b>

Microfilming - \$6,424.00 a year

PMP costs - \$3,800 a year

-

Date: 6/07/02  
Activity: 613H, Rev. 1

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06 ☒ FY 07

**WBS Number:** 65

**Activity Number:** 65

**Activity Title:** Quality Assurance

**Work Package Number:** 65-B03, 65-B04, 65-B05, 65-B06, 65-B07

**Work Package Title:** Quality Assurance

**Work Package Description:** Provide quality assurance program in conformance with the specifications in Contract W-7405-ENG-92-M.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Maintain the quality assurance plan and administrative procedures required to manage the program in an up-to-date status to control project activities. This will be accomplished by the following activities:

- ◆ conduct indoctrination and training on new and revised quality assurance program plans and procedures
- ◆ assist in the preparation, revision, review and approval of decontamination technical plans and procedures to assure that they satisfy quality assurance requirements
- ◆ monitor the BCLDP, LLW and TRU operations through independent activity assessments (surveillance) as well as independent programmatic assessments (audits)
- ◆ administer the nonconformance reporting systems and the quality improvement program
- ◆ conduct quality assurance audits of prospective and current subcontractors/vendors to evaluate their quality assurance programs and capabilities

### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. DOE Order 414.1A
3. ASME NQA-1-1989
4. DOE Carlsbad TRU Waste Acceptance Criteria for the WIPP
5. DOE Hanford LLW Waste Acceptance Criteria (HNF-0063)
6. Nevada Test Site Waste Acceptance Criteria

### **Input Descriptions:**

1. Staff to be trained on quality assurance program plans and procedures
2. Decontamination technical plans and procedures
3. LLW and TRU operations
4. Prospective subcontractors/vendors and their quality assurance programs

### **Output Descriptions:**

1. Staff trained on quality assurance program plans and procedures
2. Reviewed decontamination technical plans and procedures
3. Surveillance and audit reports of LLW and TRU operations
4. Quality assurance audits of prospective and current subcontractors'/vendors' quality assurance programs and capabilities

### **Assumptions:**

1. Once TRU waste shipments to the DOE Hanford site are completed in FY 2003, full implementation of DOE Order 414.1A and ASME NQA-1 requirements will be applied only to those activities and processes supporting characterization, certification and transportation of radioactive waste (non-TRU),

and Analytical Laboratory activities. A graded approach will be applied to all other BCLDP activities in accordance with DOE Order 414.1A.

2. FY 2003 staffing requirements will remain at 80% of the FY 2002 requirements in order to revise the DDO Quality Manual and associated Administrative Procedures to reflect a graded approach, while ensuring appropriate quality requirements are applied to regulatory compliance, environmental safety and health activities and oversight, decontamination, decommissioning, training and management, and environmental monitoring.
3. Under the fully implemented graded approach in FY 2004, while decontamination activities are still ongoing in JN-1, QA Staffing can be further reduced to the level necessary to maintain assurance of completion with ASME NQA-2 for those activities identified under Assumption 1, above, and perform the appropriate number of internal audits on the remaining activities on a graded approach basis.
4. Additional QA staffing reductions can be implemented in FYs 2005 and 2006 corresponding to the completion of JN-1 decontamination and JN-1 demolition, respectively. Minimal QA requirements continue into FY 2007 during project closeout activities (license termination, records closeout, etc.)

**Estimated Time to Plan the Work (Including Review and Approval): N/A**  
**Estimated Resources Required to Plan the Work**

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year – these estimates will be constant over the life of the project.

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours					PP E/L aun dry	Total Jumps
Program Manager	HBA							N/A
Manager/Senior Staff	HBB	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>		N/A
Technical Advisors	HBTA	1/year/1840	1288	1288	920	0		N/A
Project Manager/HP Manager	HBPM							N/A
Task Leader	HBTL	1/year/1104	0	0	0	0		N/A
Battelle Technician	HBT							N/A
Battelle Technician O/T	HBTO							N/A
RAL Staff	HBL							N/A
Support Professional	HBP	1/year/1840	1840	1288	920	552		N/A
Secretary/Clerical	HBS							N/A
Decon Ops Hourly	HBH	1/year/1104	1104	920	552	0		N/A

BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** There will be no extraordinary purchases - use history.

**Special Equipment/Material:** There will be no extraordinary purchases – use history.

### Basis of Estimate

**Comments/Explanations:**

What is the estimator's experience? I have 24 years of experience in the Nuclear Quality Assurance/Project Management areas.

What experience is directly related to BCLDP? 11 plus years of this experience has been with the BCLDP.

Did we apply a complexity factor during our thought process? Yes-See assumptions.

**Completed by:** Gordon Eriksen

**Date:** June 10, 2002    **Rev. 0**No.: 0

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06

**WBS Number:** 781

**Activity Number:** 781B

**Activity Title:** West Jefferson Decontamination Management Planning and Development

**Work Package Number:** 781-B03, -B04, -B05, -B06

**Work Package Title:** West Jefferson Decontamination Management Planning and Development

**Work Package Description:** Overall management, oversight, planning, coordination, logistical, and administrative support for remedial activities performed at the West Jefferson site.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Plan, manage, coordinate, and provide technical, logistic, and administrative support for the remediation activities at the West Jefferson site. This will include interaction with the DOE, Battelle Facility, Security, and Research Operations, and other BCLDP operating groups, oversight of field activities, preparation of reports, and review and approval of procurements, procedures and work instructions.

#### **Applicable Requirements/Procedures:**

1. BCLDP DD-, HP-, HS-, QD, SIH-, and WM- procedures as appropriate.

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. DOE weekly highlight reports and input for monthly, quarterly, and annual status reports
2. Management, coordination, and oversight of BCLDP decontamination activities
3. Participating in DOE weekly status meetings, BCO integrated schedule meetings, monthly staff meetings, daily & weekly scheduling meetings.
4. Revision, review and approval of requisitions, procedures, plans, work instructions

#### **Assumptions:**

1. Level of effort decreases by 5% after demolition of JN-1 Office Area
2. Level of effort decreases by 15% after demolition of JN-1 Original Structure & WSS
3. Level of effort decreases by 15% after demolition of JN-1 High Bay
4. Level of effort decreases by 5% after demolition of JN-3
5. Level of effort decreases by 5% after demolition of JN-2

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** 240 days per year

### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	1 / 240 / 1260		N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM	5 / 240 / 552		N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	1 / 240 / 1283		N/A
Decon Ops Hourly	HBH	1 / 240 / 375		N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Twenty years experience in planning and conduct of government and industrial R&D projects at Battelle

**What experience is directly related to BCLDP?** Eight years of direct BCLDP experience planning and managing Remedial Action activities including material & utility removal, decontamination, excavation and drain removal, and asbestos abatement

**Did we apply a complexity factor during our thought process?** No.

**Completed by:** D. A. Seifert

**Date:** 6/10/02

**Rev. No.:** 3

	Management, planning & coordination (No / FTE's)	Preparation of reports, plans, etc	Procedure Revision, Review, Approval	Management Surveillances	Meeting Participation	Clerical, Admin.	Assessments
HBB	1 / .21	1 / .11	1 / .02	1 / .14	1 / .20		1 / .02
HBPM	5 / .15	5 / .05	5 / .05		5 / .05		
HBS	1 / .05	1 / .45			1 / .05	1 / .15	
HBH			1 / .2				



☒ FY 03 ☒ FY 04 ☒ FY 05

**WBS Number:** 781

**Activity Number:** 781C

**Activity Title:** BCLDP Technician Subcontract Administration

**Work Package Number:** 781-C03, -C04, -C05

**Work Package Title:** BCLDP Technician Subcontract Administration

**Work Package Description:** Management, oversight, coordination, and administrative support for contracted decontamination labor, health physics labor, and professional services.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Plan, manage, negotiate, and administer the contractual agreement between Battelle and a subcontractor organization to assure that adequate qualified labor and technical support for BCLDP decommissioning activities are provided in a timely manner. This will include generation of contract scopes, statements of work, terms and conditions, negotiations with contracting officers and representatives, and interaction with the contractor's representative to resolve contract issues and agreements, specify numbers, categories and durations of labor required for the duration of the contract.

### **Applicable Requirements/Procedures:**

1. Battelle procurement requirements

### **Input Descriptions:**

1. N/A

### **Output Descriptions:**

1. Administration and control of contractor labor at levels required to meet BCLDP objectives.
2. Timely and accurate accounting of and invoicing for subcontractor labor hours by category.
3. Professional services as required according to negotiated rates and fees.

### **Assumptions:**

1. Contract performance will be reviewed on an annual basis
2. Contract will be rebid once every five years beginning in April 2006.
3. Subcontracted technician staff will be utilized at some level until all radioactive material has been removed from the site and there are no longer any radiological restrictions.
4. Contractor interface: HBB → 1 hr/day @ 250 day/yr = 250 hr/yr
5. Contract invoice tracking: HBP → 6 hr/wk @ 50 wk/yr = 300 hr/yr
6. Drug screening (technicians): HRD → 2 hr/wk @ 25 wk/yr = 50 hr/yr
7. Drug screening (HP technicians): HRH → 2 hr/wk @ 25 wk/yr = 50 hr/yr

**Estimated Time to Plan the Work (Including Review and Approval): N/A**

**Estimated Resources Required to Plan the Work: N/A**

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Ongoing until all radioactive material has been removed from the site and there are no longer any radiological restrictions.

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

On an annual basis:

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	1 / 250 / 250		N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP	1 / 250 / 300		N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	1 / 250 / 50		N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH	1 / 250 / 50		N/A
Bartlett Admin Support	HRA			N/A
Bartlett Admin Support	HRA			

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 15 years experience in operational planning and execution in both private industry and DOE projects.

**What experience is directly related to BCLDP?** 5 years of direct experience in D&D of nuclear facilities within the DOE complex.

**Did we apply a complexity factor during our thought process?** The estimate was based on prior experience conducting similar work on the BCLDP. No complexity factor was used.

**Completed by:** P. Weaver

**Date:** 5/10/01 (Updated PJW 6-10-02)

**Rev. No.:** 0

☒ FY 03 ☒ FY 04 until JN-1 Demolition starts

**WBS Number:** 781

**Activity Number:** 781D

**Activity Title:** WJ Special Projects Development & Engineering

**Work Package Number:** 781-D03, -D04

**Work Package Title:** WJ Special Projects Development & Engineering

**Work Package Description:** Evaluate developing technologies for applicability to the BCLDP mission. Develop strategies, plans, schedules, and cost estimates for implementation of new technologies, installation of temporary facilities, etc., designed to improve efficiency of the BCLDP performance at the WJ North site.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Review planned BCLDP activities and approaches with respect to current and emerging technologies. Evaluate relative merits/deficiencies of alternative approaches for area decontamination, contamination stabilization, soil, pipe, and utilities excavation and removal at the WJN site. Provide planning and engineering for acquisition and installation of temporary facilities needed to maintain BCLDP activities.

#### **Applicable Requirements/Procedures:**

- 1.

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Recommendations for improving BCLDP remedial activities within currently accepted regulatory guidance.
2. Plans, schedules, subcontracts, etc., required to provide procurement and installation of temporary facilities required for BCLDP operations.
3. Technical liaison with other Ohio Field Office sites to maintain awareness of technology developments and deployments of potential interest to the BCLDP.

#### **Assumptions:**

1. Blanket or specialized professional engineering service agreements will be required for the development of approaches, schedules, and cost estimates where structural engineering expertise and certification are required to meet regulatory codes and maintain reasonable safety standards.
2. Approximately one-third time for one Projects Manager will be required to generate statements of work, administer and oversee subcontractor efforts, and evaluate approaches, and field test technologies for use by the BCLDP until JN-1 is demolition ready.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM	1 / year / 607		N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	1 / year / 80		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

What is the estimator's experience? Twenty years experience in planning and conduct of government and industrial R&D projects at Battelle

**What experience is directly related to BCLDP?** Eight years of direct BCLDP experience planning and managing Remedial Action activities including material & utility removal, decontamination, excavation and drain removal, and asbestos abatement

**Did we apply a complexity factor during our thought process?** No. estimate based on current level of activity.

**Completed by:** D. A. Seifert

**Date:** 5/22/01

**Rev. No.:** 1

☒ FY 05 ☒ FY 06      **Start of JN-1 Demolition until External Grounds are Completed**

**WBS Number:** 781

**Activity Number:** 781E

**Activity Title:** WJ Special Projects Development & Engineering

**Work Package Number:** 781-D05, -D06

**Work Package Title:** WJ Special Projects Development & Engineering

**Work Package Description:** Evaluate developing technologies for applicability to the BCLDP mission. Develop strategies, plans, schedules, and cost estimates for implementation of new technologies, installation of temporary facilities, etc., designed to improve efficiency of the BCLDP performance at the WJ North site.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Review planned BCLDP activities and approaches with respect to current and emerging technologies. Evaluate relative merits/deficiencies of alternative approaches for area decontamination, contamination stabilization, soil, pipe, and utilities excavation and removal at the WJN site. Provide planning and engineering for acquisition and installation of temporary facilities needed to maintain BCLDP activities.

#### **Applicable Requirements/Procedures:**

- 1.

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Recommendations for improving BCLDP remedial activities within currently accepted regulatory guidance.
2. Plans, schedules, subcontracts, etc., required to provide procurement and installation of temporary facilities required for BCLDP operations.
3. Technical liaison with other Ohio Field Office sites to maintain awareness of technology developments and deployments of potential interest to the BCLDP.

#### **Assumptions:**

1. Blanket or specialized professional engineering service agreements will be required for the development of approaches, schedules, and cost estimates where structural engineering expertise and certification are required to meet regulatory codes and maintain reasonable safety standards.
2. Approximately one quarter time for one Projects Manager will be required to generate statements of work, administer and oversee subcontractor efforts, and evaluate approaches, and field test technologies for use by the BCLDP after JN-1 is demolition ready until External Area remediation is complete.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

#### **Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM	1 / year / 460		N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	1 / year / 80		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**



**What is the estimator's experience?** Twenty years experience in planning and conduct of government and industrial R&D projects at Battelle

**What experience is directly related to BCLDP?** Eight years of direct BCLDP experience planning and managing Remedial Action activities including material & utility removal, decontamination, excavation and drain removal, and asbestos abatement

**Did we apply a complexity factor during our thought process?** No. estimate based on current level of activity.

**Completed by:** D. A. Seifert

**Date:** 5/22/01

**Rev. No.:** 1

☒ FY 03 ☒ FY 04

## **FY 2003 to Start of Demolition of JN-1**

**WBS Number:** 782

**Activity Number:** 782A

**Activity Title:** Decontamination Training

**Work Package Number:** 782-B03, -B04

**Work Package Title:** Decontamination Training

**Work Package Description:** The DDO Training Program outlines the training requirements for employees, subcontractors, visitors, and others engaged in all facets of the decontamination and decommissioning program. The training program directly addresses health, safety, and environmental concerns for these workers.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide qualified staff through the development, delivery, and monitoring of quality training to ensure safe and proper decommissioning and decontamination of Battelle facilities.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. DD-93-04 DDO Training Program
3. DD-MN-01 DDO Quality Manual
4. TD-AP-1.0 The Personnel Training and Qualification System
5. TD-AP-2.0 Indoctrination, Training and Qualification
6. Requirements from various governmental agencies (EPA, OSHA, DOE, NRC)

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Classroom instruction
2. On-the-job training documentation
3. Procedure demonstration or documented reading of procedures and plans that meet federal, state, local, and BCLDP training requirements
4. A training and qualification records system that tracks staff training using an electronic database systems and a paper file of training records.

#### **Assumptions:**

1. Time spent in training by BCLDP staff is not charged to the training budget.
2. Some courses will be attended by both BCO and BCLDP staff and the instructor cost will be shared.
3. BCLDP Training Staff will continue to support BCO ESH&Q Training.
4. Class size will decrease but the number of required core courses will remain constant.
5. New required courses will be developed to meet changing needs. (e.g. Hazard Analysis, TRU)
6. BCLDP staff will serve as instructors for core courses.
7. Consultants may develop and/or teach specialized courses.
8. Computer support will continue to be needed for the Training Information Management System.
9. New subcontracting staff will need to be trained.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A
Bartlett Admin Support	HRA	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	2/.../485		N/A
Project Manager/HP Manager	HBPM	2/.../280		N/A
Task Leader	HBTL	2/.../95		N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP	1/.../60		N/A
Secretary/Clerical	HBS	1/.../460		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE	*5/.../60		N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	1/.../25		N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

\*BCO staff (HCE) who need training to do BCLDP work charge an avg. of 5 hrs. a month to the training budget.  
(e.g. facilities staff)

**Subcontract/Purchased Service:**

- Outside contractors charge 92 hrs. various rates = \$5,329 to the training budget. (e.g. Myers Movers, Crane America, Concrete Coring, Carlisle Mechanical)
- Consultants to develop and/or teach specialized courses = \$4,500.00 (Based on \$112.50 hourly rate x 40 hrs)

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 32 years experience in general record keeping as an administrator, instructor, and manager within various educational systems and on government projects.

**What experience is directly related to BCLDP?** 9 years of direct BCLDP experience including 6 years managing the Project Records/Document Control System

**Did we apply a complexity factor during our thought process?** Due to reduced funding, I assumed a reduction in work and records produced for FY2002 until start-up of the demolition of JN-1. At start-up, I assumed a further reduction in work and records produced until the end point of the project at which time the workload in Project Records would increase.

**Completed by:** Ruth Baruth

**Date:** 6/07/02 **Rev. No.:** 1

## WBS 782 Training FY 2002 to the Midpoint

Code	Persons/Hours	
HBTA	2/485	(1/460 and 1/25)
HBPM	2/280	(1/120 and 1/160)
HBS	1/460	
HBTL	2/95	
HRD	1/25	
HBP	1/60	
HCE	5/60	(BCO facilities staff – avg. 5 hrs. a month)

HBTA – Baruth, Winemiller      HBTL – Berchtold, Friedman      HBS – McKenzie      HCE – Facilities  
HBPM – Brenner, Sapp      HRD – McCall      HBP – Mohler

### Training Coordination

1. Identify, plan, and prioritize training needs; prepare training status reports (25%)
2. Develop and maintain training plan and procedures. (10%)
3. Produce and issue a quarterly training calendar. (25%)
4. Recruit and motivate instructional staff. (20%)
5. Evaluate course presentations and materials. (10%)
6. Manage a training database system to track training and identify retraining needs. (10%)

### Instruction

1. Prepare course materials including objectives, student handouts, classroom aids, and exams.
2. Present courses in the style appropriate to the topic and audience; conduct On-the-Job Training (OJT)
3. Administer and grade examinations that measure the accomplishment of objectives.
4. Evaluate and revise course content on a routine basis.
5. Prepare training procedures that may be necessary to define specific topics.

### Administrative Support (HBS)

1. Maintain the Training Information Management System (TIMS) database that tracks training and qualification of all D&D staff. (25%)
2. Produce appropriate reports including Bi-monthly TIMS Report, Quarterly Re-training Report, Procedure Re-qualification Report, and Missing Requirements Reports. (20%)
3. Coordinate course logistics including registration, confirmations, attendance sheets, certificates, refreshments, and evaluations. (30%)
4. Type and distribute a quarterly training calendar as well as a weekly schedule for the Intranet. (15%)
5. Perform administrative duties including preparing letters, ordering supplies, typing procedures, mailing documents, and filing paperwork. (10%)

### Technical Support

1. Resolve problems or “glitches” with the training database. (70%)
2. Design reports. (20%)
3. Write scripts for the database to add features for tracking training. (10%)

**WBS 782 Training  
FY 2002 to the Midpoint**

<b>Training Coordination</b>	<b>HBTA (460 hrs)</b>
1. Identify, plan, and prioritize training needs; produce training status reports	25%
2. Develop and maintain training plan and procedures	10%
3. Produce and issue a quarterly training calendar	25%
4. Recruit and motivate instructional staff	20%
5. Evaluate course presentations and materials	10%
6. Manage a training database system to track training and identify retraining needs	10%
<b>TOTAL</b>	<b>100%</b>

<b>Instruction</b>	<b>HBTA (25 hrs)</b>	<b>HBTL 1 (85 hrs)</b>	<b>HBTL 2 (10 hrs)</b>	<b>HRD (25 hrs)</b>	<b>HBPM-1 (120 hrs)</b>	<b>HBPM-2 (160 hrs)</b>
1. Prepare course materials	15%			15%	15%	15%
2. Present courses; conduct OJT	65%	100%	100%	65%	65%	50%
3. Administer/grade exams	10%			10%	10%	10%
4. Evaluate/revise course content	10%			10%	10%	10%
5. Prepare training procedures						15%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

<b>Administrative Support</b>	<b>HBS (460 hrs)</b>
1. Maintain the Training Information Mgmt System (TIMS) database	25%
2. Produce appropriate reports	20%
3. Coordinate course logistics	30%
4. Type and distribute a quarterly training calendar	15%
5. Perform administrative duties including preparing letters, ordering supplies, mailing documents, filing records, etc.	10%
<b>TOTAL</b>	<b>100%</b>

<b>Technical Support</b>	<b>HBP (60 hrs)</b>
1. Resolve problems or "glitches" with the training database	70%
2. Design reports	20%
3. Write scripts for the database to add features for tracking training	10%
<b>TOTAL</b>	<b>100%</b>

\*BCO staff (HCE) who need training to do BCLDP work charge an avg. of 5 hrs. a month to the training budget. (e.g. facilities staff)

Outside contractors (e.g. Myers Movers, Crane America, Concrete Coring, Carlisle Mechanical) charge 92 hrs x various rates = \$5,329

Consultants to teach specialized courses = \$4,500.00 (Based on \$112.50 hourly rate x 40 hrs)

☒ FY 05

## **JN-1 Demolition to End of Building Demolition**

**WBS Number:** 782

**Activity Number:** 782B

**Activity Title:** Decontamination Training

**Work Package Number:** 782-B05

**Work Package Title:** Decontamination Training

**Work Package Description:** The DDO Training Program outlines the training requirements for employees, subcontractors, visitors, and others engaged in all facets of the decontamination and decommissioning program. The training program directly addresses health, safety, and environmental concerns for these workers.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide qualified staff through the development, delivery, and monitoring of quality training to ensure safe and proper decommissioning and decontamination of Battelle facilities.

#### **Applicable Requirements/Procedures:**

1. Contract statement of work
2. DD-93-04 DDO Training Program
3. DD-MN-01 DDO Quality Manual
4. TD-AP-1.0 The Personnel Training and Qualification System
5. TD-AP-2.0 Indoctrination, Training and Qualification
6. Requirements from various governmental agencies (EPA, OSHA, DOE, NRC)

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Classroom instruction
2. On-the-job training documentation
3. Procedure demonstration or documented reading of procedures and plans that meet federal, state, local, and BCLDP training requirements
4. A training and qualification records system that tracks staff training using an electronic database systems and a paper file of training records.

#### **Assumptions:**

1. Time spent in training by BCLDP staff is not charged to the training budget.
2. Some courses will be attended by both BCO and BCLDP staff and the instructor cost will be shared.
3. BCLDP Training Staff will continue to support BCO ESH&Q Training.
4. Class size will decrease but the number of required core courses will remain constant.
5. New required courses will be developed to meet changing needs. (e.g. Hazard Analysis, TRU)
6. BCLDP staff will serve as instructors for core courses.
7. Consultants may develop and/or teach specialized courses.
8. Computer support will continue to be needed for the Training Information Management System .
9. New subcontracting staff will need to be trained.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**  
N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A
Bartlett Admin Support	HRA	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	2/.../300		N/A
Project Manager/HP Manager	HBPM	2/.../180		N/A
Task Leader	HBTL	1/.../10		N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP	1/.../40		N/A
Secretary/Clerical	HBS	1/.../370		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE	*5/.../60		N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

\*BCO staff (HCE) charge an average of 5 hrs a month to the training budget (60 hrs a year)

**Subcontract/Purchased Service:** Outside contractors charge 46 hrs at various rates = \$2,665 to the training budget (e.g. Myers Movers, Crane America, Concrete Coring, Carlisle Mechanical)

**Special Equipment/Material:** Training Consultants = 20 hrs x \$112.50 = \$2,250.



**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 32 years experience in general record keeping as an administrator, instructor, and manager within various educational systems and on government projects.

**What experience is directly related to BCLDP?** 9 years of direct BCLDP experience including 6 years managing the Project Records/Document Control System

**Did we apply a complexity factor during our thought process?** Due to reduced funding, I assumed a reduction in work and records produced for FY2002 until start-up of the demolition of JN-1. At start-up, I assumed a further reduction in work and records produced until the end point of the project at which time the workload in Project Records would increase.

**Completed by:** Ruth Baruth

**Date:** 6/07/02

**Rev. No.:** 1

## WBS 782 Training JN-1 Demolition to End Point

Code	Persons/Hours	
HBTA	2/300	(1/275 and 1/25)
HBPM	2/180	(1/130 and 1/50)
HBS	1/370	
HBTL	1/10	
HBP	1/40	
HCE	5/60	(BCO facilities staff – avg. 5 hrs a month)

HBTA – Baruth, Winemiller  
HBPM – Brenner, Sapp

HBTL – Berchtold  
HBP – Mohler

HBS – McKenzie  
HCE – BCO Facilities

### Training Coordination

1. Identify, plan, and prioritize training needs; prepare training status reports (25%)
2. Develop and maintain training plan and procedures. (10%)
3. Produce and issue a quarterly training calendar. (25%)
4. Recruit and motivate instructional staff. (20%)
5. Evaluate course presentations and materials. (10%)
6. Manage a training database system to track training and identify retraining needs. (10%)

### Instruction

1. Prepare course materials including objectives, student handouts, classroom aids, and exams.
2. Present courses in the style appropriate to the topic and audience; conduct On-the-Job Training (OJT)
3. Administer and grade examinations that measure the accomplishment of objectives.
4. Evaluate and revise course content on a routine basis.
5. Prepare training procedures that may be necessary to define specific topics.

### Administrative Support (HBS)

1. Maintain the Training Information Management System (TIMS) database that tracks training and qualification of all D&D staff. (25%)
2. Produce appropriate reports including Bi-monthly TIMS Report, Quarterly Re-training Report, Procedure Re-qualification Report, and Missing Requirements Reports. (20%)
3. Coordinate course logistics including registration, confirmations, attendance sheets, certificates, refreshments, and evaluations. (30%)
4. Type and distribute a quarterly training calendar as well as a weekly schedule for the Intranet. (15%)
5. Perform administrative duties including preparing letters, ordering supplies, typing procedures, mailing documents, and filing paperwork. (10%)

**Technical Support**

1. Resolve problems or “glitches” with the training database. (70%)
2. Design reports. (20%)
3. Write scripts for the database to add features for tracking training. (10%)

**WBS 782 Training  
JN-1 Demolition to End Point**

<b>Training Coordination</b>	<b>HBTA (275 hrs)</b>
1. Identify, plan, and prioritize training needs; produce training status reports	25%
2. Develop and maintain training plan and procedures	10%
3. Produce and issue a quarterly training calendar	25%
4. Recruit and motivate instructional staff	20%
5. Evaluate course presentations and materials	10%
6. Manage a training database system to track training and identify retraining needs	10%
<b>TOTAL</b>	<b>100%</b>

<b>Instruction</b>	<b>HBTA-1 (25 hrs)</b>	<b>HBTL (10 hrs)</b>	<b>HBPM-1 (130 hrs)</b>	<b>HBPM-2 (50 hrs)</b>
1. Prepare course materials	15%		15%	15%
2. Present courses; conduct OJT	65%	100%	65%	50%
3. Administer/grade exams	10%		10%	10%
4. Evaluate/revise course content	10%		10%	10%
5. Prepare training procedures				15%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

<b>Administrative Support</b>	<b>HBS (370 hrs)</b>
1. Maintain the Training Information Management System (TIMS) database	25%
2. Produce appropriate reports	20%
3. Coordinate course logistics	30%
4. Type and distribute a quarterly training calendar	15%
5. Perform administrative duties including preparing letters, ordering supplies, mailing documents, filing records, etc.	10%
<b>TOTAL</b>	<b>100%</b>

<b>Technical Support</b>	<b>HBP (40 hrs)</b>
1. Resolve problems or “glitches” with the training database	80%
2. Write scripts for the database to add features for tracking training	20%
<b>TOTAL</b>	<b>100%</b>

Anticipate that:

- BCO staff (HCE) who need training to do BCLDP work charge an average of 5 hrs a month to the training budget. (e.g. facilities staff)
- Outside contractors (e.g. Myers Movers, Crane America, Concrete Coring, Carlisle Mechanical) charge 46 hrs at various rates = \$2,665 to training

- Consultants to develop and/or teach specialized courses = \$2,250.00 (Based on \$112.50 hourly rate x 20 hrs)

☒ FY 06

## End Point

**WBS Number:** 782

**Activity Number:** 782C

**Activity Title:** Decontamination Training

**Work Package Number:** 782-B06

**Work Package Title:** Decontamination Training

**Work Package Description:** The DDO Training Program outlines the training requirements for employees, subcontractors, visitors, and others engaged in all facets of the decontamination and decommissioning program. The training program directly addresses health, safety, and environmental concerns for these workers.

## Basis of Estimate

**Strategy for Accomplishing Task:** Provide qualified staff through the development, delivery, and monitoring of quality training to ensure safe and proper decommissioning and decontamination of Battelle facilities.

### Applicable Requirements/Procedures:

1. Contract statement of work
2. DD-93-04 DDO Training Program
3. DD-MN-01 DDO Quality Manual
4. TD-AP-1.0 The Personnel Training and Qualification System
5. TD-AP-2.0 Indoctrination, Training and Qualification
6. Requirements from various governmental agencies (EPA, OSHA, DOE, NRC)

### Input Descriptions:

1. N/A

### Output Descriptions:

1. Classroom instruction
2. On-the-job training documentation
3. Procedure demonstration or documented reading of procedures and plans that meet federal, state, local, and BCLDP training requirements
4. A training and qualification records system that tracks staff training using an electronic database systems and a paper file of training records.

### Assumptions:

1. Time spent in training by BCLDP staff is not charged to the training budget.
2. Some courses will be attended by both BCO and BCLDP staff and the instructor cost will be shared.
3. BCLDP Training Staff will continue to support BCO ESH&Q Training.
4. Class size will decrease but the number of required core courses will remain constant.
5. New required courses will be developed to meet changing needs. (e.g. Hazard Analysis, TRU)
6. BCLDP staff will serve as instructors for core courses.
7. Consultants may develop and/or teach specialized courses.
8. Computer support will continue to be needed for the Training Information Management System .
9. New subcontracting staff will need to be trained.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**  
N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A
Bartlett Admin Support	HRA	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	2/.../300		N/A
Project Manager/HP Manager	HBPM	1/.../140		N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS	1/.../275		N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE	*5/.../60		N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

\*BCO staff (HCE) charge an average of 5 hrs a month to the training budget (60 hrs a year)

**Subcontract/Purchased Service:**

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 32 years experience in general record keeping as an administrator, instructor, and manager within various educational systems and on government projects.

**What experience is directly related to BCLDP?** 9 years of direct BCLDP experience including 6 years managing the Project Records/Document Control System

**Did we apply a complexity factor during our thought process?** Due to reduced funding, I assumed a reduction in work and records produced for FY2002 until start-up of the demolition of JN-1. At start-up, I assumed a further reduction in work and records produced until the end point of the project at which time the workload in Project Records would increase.

**Completed by:** Ruth Baruth

**Date:** 6/07/02

**Rev. No.:** 1 (no change)

## WBS 782 Training End Point

Code	Persons/Hours	
HBTA	2/300	(1/275 and 1/25)
HBPM	1/140	
HBS	1/275	
HCE	5/60	(BCO facilities – avg. 5 hrs. a month)

HBTA – Baruth, Winemiller  
HBPM – Brenner

HBS – McKenzie  
HCE – BCO facilities staff

### Training Coordination

1. Identify, plan, and prioritize training needs; prepare training status reports (30%)
2. Produce and issue a quarterly training calendar. (30%)
3. Recruit and motivate instructional staff. (25%)
4. Manage a training database system to track training and identify retraining needs. (15%)

### Instruction

1. Prepare course materials including objectives, student handouts, classroom aids, and exams.
2. Present courses in the style appropriate to the topic and audience; conduct On-the-Job Training (OJT)
3. Administer and grade examinations that measure the accomplishment of objectives.
4. Prepare training procedures that may be necessary to define specific topics.

### Administrative Support (HBS)

1. Maintain the Training Information Management System (TIMS) database that tracks training and qualification of all D&D staff. (25%)
2. Produce appropriate reports including TIMS Report, Quarterly Re-training Report, Procedure Re-qualification Report, and Missing Requirements Reports. (20%)
3. Coordinate course logistics including registration, confirmations, attendance sheets, certificates, refreshments, and evaluations. (30%)
4. Type and distribute a quarterly training calendar. (15%)
5. Perform administrative duties including preparing letters, ordering supplies, typing procedures, mailing documents, and filing paperwork. (10%)



**WBS 782 Training  
End Point**

<b>Training Coordination</b>	<b>HBTA (275 hrs)</b>
1. Identify, plan, and prioritize training needs; produce training status reports	30%
3. Produce and issue a quarterly training calendar	30%
4. Recruit and motivate instructional staff	25%
6. Manage a training database system to track training and identify retraining needs	15%
<b>TOTAL</b>	<b>100%</b>

<b>Instruction</b>	<b>HBTA (25 hrs)</b>	<b>HBPM-1 (140 hrs)</b>
1. Prepare course materials	15%	15%
2. Present courses; conduct OJT	65%	65%
3. Administer/grade exams	10%	10%
4. Evaluate/revise course content	10%	10%
5. Prepare training procedures		
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>

<b>Administrative Support</b>	<b>HBS (275 hrs)</b>
1. Maintain the Training Information Management System (TIMS) database	25%
2. Produce appropriate reports	20%
3. Coordinate course logistics	30%
4. Type and distribute a quarterly training calendar	15%
5. Perform administrative duties including preparing letters, ordering supplies, mailing documents, filing records, etc.	10%
<b>TOTAL</b>	<b>100%</b>

- BCO staff (HCE) who need training to do BCLDP work charge an average of 5 hrs a month to the training budget. (e.g. facilities staff)

☒ FY 03 ☒ FY 04

**Until Hot Cells are Gone**

**WBS Number:** 783

**Activity Number:** 783B

**Activity Title:** West Jefferson Radioanalytical Lab (RAL)

**Work Package Number:** 783-B03, -B04

**Work Package Title:** West Jefferson Radioanalytical Lab (RAL) Support

**Work Package Description:** Provide Radioanalytical services in support of the BCLDP needs.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Radioanalytical laboratory support to BCLDP including sample analyses, review of management functions, quality assurance documentation assessment and findings.

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. Request sample analyses

**Output Descriptions:**

1. BCLDP radioanalytical sample analysis
2. Self-Assessments – Technical Management, Monthly Walk-Down
3. Procedure review
4. Updating laboratory practices
5. Analytical data results reported to clients
6. Quality Control data for instrumentation and analyses
7. Maintaining source inventory
8. Training – RAL & BCLDP
9. Yearly State of Utah recertification

**Assumptions:**

1. See table included in Comments/Explanations with Trigger Point information.
2. Off-site analytical costs will be estimated under Managed Waste.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	0.01 FTE/ 21 hrs/ year		N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL	1.6 FTE / 2950 hrs/ year		N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	0.5 FTE / 950 hrs/year		N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH	0.85 FTE / 1615 hrs/year		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

1. Yearly hardware maintenance contract with Canberra (\$14,393 for FY 02) and Packard (\$4,372 for FY 02)
2. Yearly software contract with Canberra (\$6,329 for FY 02)
3. Yearly software upgrade alpha/gamma system with Canberra (\$3,701 for FY 02)
4. Yearly recalibration of analytical balances with Mettler (~\$369 for FY 02)
5. Yearly State of Utah recertification costs (\$5,319 for FY 02 plus \$1,586 travel expenses added for odd years.

6. FY yearly even/odd totals with 5.75% sales tax added - FY 03 = \$36,070; FY 04 = \$34,483; etc.

Trigger points for reduction in purchased services:

NOTE: FY costs based on FY 02 costs.

1. Last year of the project – Canberra and Packard hardware/service maintenance and software contracts ended.

**Special Equipment/Material:** N/A

**Comments/Explanations:**

**Basis of Estimate:**

**Estimator's Experience:** 17 years in radiochemical laboratory

**BCLDP Experience:** 6 years in Radioanalytical Laboratory

**Complexity Factor:** The application of the Dose to Curie document to the waste stream was the initial trigger point for a reduction in the Radioanalytical Laboratory (RAL) oversight projected for FY 02. Environmental monitoring sample reduction will occur when the source term has been removed from the site. The reduction in environmental sampling has been figured in with Trigger Point "Completion of Hot Cells (JN1)".

The table below lists the proposed reductions based on current knowledge of baseline activities. Should the BCLDP make changes to the current sampling list, and/or the RAL start analyzing off-site samples (e.g., West Valley) then more Radioanalytical Laboratory oversight may be required.

Trigger Point	RAL Support FTEs Required	% of Current Effort	% Reduction from Previous Trigger Point
Current Program (FY '03)	2.96	100	N/A
Completion of Hot Cells (JN1)	2.24	76	24
Last year of project	1.51	67	33

**Completed by:** Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06

**WBS Number:** 783

**Activity Number:** 783C

**Activity Title:** Characterization Management Planning and Development

**Work Package Number:** 783-A03, 783-A04, 783-A05, 783-A06,

**Work Package Title:** Characterization Management Planning and Development

**Work Package Description:** Programmatic oversight management of the BCLDP Characterization Program designed for the radiological release Battelle facilities and grounds for unrestricted use. Oversight of maintenance contracts for equipment and certifications; repair and calibration of equipment,

### Basis of Estimate

**Strategy for Accomplishing Task:** Provide programmatic management oversight of the characterization program for the BCLDP. This is accomplished by the following items: develop and maintain the BCLDP Characterization Program and Plans; maintain and update current characterization plans, technical basis documents, and procedures; prepare new plans and procedures as necessary; provide budgeting, as well as quality assurance audit support and response; project training; interface with the DOE and the Independent Verification Contractor (IVC).

#### Applicable Requirements/Procedures:

1. Contract statement of work
2. BCLDP Decommissioning Plan
3. NUREG 5849 "Manual for Conducting Radiological surveys in Support of License Termination"

#### Input Descriptions:

1. N/A

#### Output Descriptions:

1. Quality assurance of all data generated from characterization operations
2. Develop & Maintain Characterization Program
3. Perform Self Assessment & Conduct QA Program
4. Characterization Procedures/Plans are reviewed, revised, and developed
5. Perform DOE/IVC/NRC interface for the BCLDP

#### Assumptions:

Characterization Manager (HBB):

1. 1Mgr-DOE Weekly-----50 wk/yr x 1.5hr/wk	=	75 hr/yr
2. 1Mgr-Char Procedure Revision/Review/Update	=	25 hr/yr
3. 1Mgr-Self Assessment/ Walkdowns/QA Resolution	=	25 hr/yr
4. 1-Mgr-DOE/IVC/NRC Response 1hr/wk--Program Management	=	50 hr/yr
5. 1-Mgr. Budget/CYWP Development	=	80hr/yr
Total		255 hr/yr

Characterization Manager (HBB)/ Task Leader (HBTL):

6. Char Procedure Revision/Review/Update	=	80 hr/yr / 40 hr/yr
7. Self Assessment/Walkdowns/QA Resolution	=	40 hr/yr / 80 hr/yr
8. DOE/IVC/NRC Resps/Program Mangmt	=	40 hr /yr / 10 hr/yr
9. Budget/CYWP Development	=	20 hr/yr / 10 hr/yr
Total		180 hr/yr / 140 hr/yr

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**  
N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Labor estimates represent a full year and are constant over the life of the project.

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	1 / year / 255		N/A
Technical Advisors	HBTA	1 / year / 180		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	1 / year / 140		N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items are anticipated.

**Special Equipment/Material:** Geoprobe Tooling =\$8,743 in FY03-07

**Comments/Explanations:** Characterization Work consistent FY03-07

**Completed by:** J.F. Poliziani

**Date:** 6/01/01

**Rev. No.:** 2

☒ FY 07

**WBS Number:** 783

**Activity Number:** 783D

**Activity Title:** Characterization Management Planning and Development

**Work Package Number:** 783-A07

**Work Package Title:** Characterization Management Planning and Development

**Work Package Description:** Programmatic oversight management of the BCLDP Characterization Program designed for the radiological release Battelle facilities and grounds for unrestricted use. Oversight of maintenance contracts for equipment and certifications; repair and calibration of equipment,

### Basis of Estimate

**Strategy for Accomplishing Task:** Provide programmatic management oversight of the characterization program for the BCLDP. This is accomplished by the following items: develop and maintain the BCLDP Characterization Program and Plans; maintain and update current characterization plans, technical basis documents, and procedures; prepare new plans and procedures as necessary; provide budgeting, as well as quality assurance audit support and response; project training; interface with the DOE and the Independent Verification Contractor (IVC).

#### Applicable Requirements/Procedures:

1. Contract statement of work
2. BCLDP Decommissioning Plan
3. NUREG 5849 "Manual for Conducting Radiological surveys in Support of License Termination"

#### Input Descriptions:

1. N/A

#### Output Descriptions:

1. Quality assurance of all data generated from characterization operations
2. Develop & Maintain Characterization Program
3. Perform Self Assessment & Conduct QA Program
4. Characterization Procedures/Plans are reviewed, revised, and developed
5. Perform DOE/IVC/NRC interface for the BCLDP

#### Assumptions:

Characterization Manager (HBB):

- |  |   |           |
|--|---|-----------|
| 1. 1Mgr-DOE Weekly-----50 wk/yr x 1.5hr/wk               | = | 75 hr/yr  |
| 2. 1Mgr-Char Procedure Revision/Review/Update            | = | 25 hr/yr  |
| 3. 1Mgr-Self Assessment/ Walkdowns/QA Resolution         | = | 0 hr/yr   |
| 4. 1-Mgr-DOE/IVC/NRC Response 1hr/wk--Program Management | = | 50 hr/yr  |
| 5. 1-Mgr. Budget/CYWP Development                        | = | 0hr/yr    |
| Total  |   | 150 hr/yr |

Characterization Manager (HBB)/ Task Leader (HBTL):

- |  |   |                      |
|--|---|----------------------|
| 6. Char Procedure Revision/Review/Update   | = | 40 hr/yr / 40 hr/yr  |
| 7. Self Assessment/Walkdowns/QA Resolution | = | 0 hr/yr / 0 hr/yr    |
| 8. DOE/IVC/NRC Resps/Program Mangmt        | = | 20 hr /yr / 20 hr/yr |
| 9. Budget/CYWP Development                 | = | 0 hr/yr / 0 hr/yr    |
| Total                                      |   | 60 hr/yr / 80 hr/yr  |

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**  
N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Labor estimates represent a full year and are constant over the life of the project.

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB	1 / year / 150		N/A
Technical Advisors	HBTA	1 / year / 60		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	1 / year / 80		N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items are anticipated.

**Special Equipment/Material:** Geoprobe Tooling =\$0K FY07

**Comments/Explanations:** Characterization Work (Field) gone FY07

**Completed by:** J.F. Poliziani

**Date:** 6/01/01

**Rev. No.:** 2



☒ FY 05

**After Completion of Hot Cells through JN1 demolition**

**WBS Number:** 783

**Activity Number:** 783E

**Activity Title:** West Jefferson Radioanalytical Lab (RAL)

**Work Package Number:** 783-B05

**Work Package Title:** West Jefferson Radioanalytical Lab (RAL) Support

**Work Package Description:** Provide Provide Radioanalytical services in support of the BCLDP needs.

**Basis of Estimate**

**Strategy for Accomplishing Task:** Radioanalytical laboratory support to the BCLDP including sample analyses, review of management functions, quality assurance documentation assessment and findings.

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. Request sample analyses

**Output Descriptions:**

1. BCLDP radioanalytical sample analyses
2. Self-Assessment – Technical Management, Monthly Walk-Down
3. Procedure review
4. Updating laboratory practices
5. Analytical data results reported to clients
6. Quality Control data for instrumentation and analyses
7. Maintaining source inventory
8. Training – RAL & BCLDP
9. Yearly State of Utah recertification

**Assumptions:**

1. See table included in Comments/Explanations with Trigger Point information.
2. Off-site analytical costs will be estimated under Managed Waste.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	0.01 FTE/ 12 hrs/ year		N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL	1.2 FTE / 2,208 hrs/ year		N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	0.38 FTE / 722 hrs/year		N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH	0.65 FTE / 1235 hrs/year		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

1. Yearly hardware maintenance contract with Canberra (\$13,610 for FY 02) and Packard (\$4,134 for FY 02)
2. Yearly software contract with Canberra (\$5,985 for FY 02)
3. Yearly software upgrade alpha/gamma systems with Canberra (\$3,500 for FY 02)
4. Yearly recalibration of analytical balances with Mettler (~\$349 for FY 02)
5. Yearly State of Utah recertification costs (\$5,030 for FY 02 plus \$1,500 travel expenses added for odd years.

6. FY yearly even/odd totals with 5.75% sales tax added - FY 05 = \$36,070

Trigger points for reduction in purchased services:

NOTE: FY costs based on FY 02 costs.

1. Last year of the project – Canberra and Packard hardware/service maintenance and software contracts ended.

**Special Equipment/Material:** N/A

**Comments/Explanations:**

**Basis of Estimate:**

**Estimator's Experience:** 17 years in radiochemical laboratory

**BCLDP Experience:** 6 years in Radioanalytical Laboratory

**Complexity Factor:** The application of the Dose to Curie document to the waste stream was the initial trigger point for a reduction in the Radioanalytical Laboratory (RAL) oversight projected for FY '02. Environmental monitoring sample reduction will occur when the source term has been removed from the site. The reduction in environmental sampling has been figured in with Trigger Point "Completion of Hot Cells (JN1)".

The table below lists the proposed reductions based on current knowledge of baseline activities. Should the BCLDP make changes to the current sampling list, and/or the RAL start analyzing off-site samples (e.g., West Valley) then more Radioanalytical Laboratory oversight may be required.

Trigger Point	RAL Support FTEs Required	% of Current Effort	% Reduction from Previous Trigger Point
Current Program (FY 03)	2.96	100	N/A
Completion of Hot Cells (JN1)	2.24	76	24
Last year of Project	1.51	67	33

**Completed by:**

Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3

☒ FY 06

**After Demolition of JN1 through last year of sampling**

**WBS Number:** 783

**Activity Number:** 783F

**Activity Title:** West Jefferson Radioanalytical Lab (RAL)

**Work Package Number:** 783-B06

**Work Package Title:** West Jefferson Radioanalytical Lab (RAL) Support

**Work Package Description:** Provide Radioanalytical services in support of the BCLDP needs.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Radioanalytical laboratory support to BCLDP including sample analyses, review of management functions, quality assurance documentation assessment and findings.

**Applicable Requirements/Procedures:**

1. Contract statement of work

**Input Descriptions:**

1. Request sample analyses

**Output Descriptions:**

1. BCLDP radioanalytical sample analyses
2. Self-assessments – Technical, Management, Monthly Walk-Down
3. Procedure review
4. Updating laboratory practices
5. Analytical data results reported to clients
6. Quality Control data for instrumentation and analyses
7. Maintaining source inventory
8. Training – RAL & BCLDP
9. Yearly State of Utah recertification

**Assumptions:**

1. See table included in Comments/Explanations with Trigger Point information.
2. Off-site analytical costs will be estimated under Managed Waste.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL	0.01 FTE/ 7 hrs/ year		N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL	0.8 FTE / 1480 hrs/ year		N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD	0.26 FTE / 495 hrs/year		N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH	0.44 FTE / 840 hrs/year		N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:**

1. Yearly hardware maintenance contract with Canberra (\$13,610 for FY 02) and Packard (\$4,134 for FY 02)
2. Yearly software contract with Canberra (\$5,985 for FY 02)
3. Yearly software upgrade for alpha/gamma system with Canberra (\$3,500 for FY 02)
4. Yearly recalibration of analytical balances with Mettler (~\$349 for FY 02)
5. Yearly State of Utah recertification costs (\$5,030 for FY 02 plus \$1,500 travel expenses added for odd years.

6. FY yearly even/odd totals with 5.75% sales tax added - FY 06 = \$369.

Trigger points for reduction in purchased services:

NOTE: FY costs based on FY 02 costs.

1. Last year of the project – Canberra and Packard hardware/service maintenance and software contracts ended.

**Special Equipment/Material:** N/A

**Comments/Explanations:**

**Basis of Estimate:**

**Estimator's Experience:** 17 years in radiochemical laboratory

**BCLDP Experience:** 6 years in Radioanalytical Laboratory

**Complexity Factor:** The application of the Dose to Curie document to the waste stream was the initial trigger point for a reduction in the Radioanalytical Laboratory (RAL) oversight projected for FY 02. Environmental monitoring sample reduction will occur when the source term has been removed from the site. The reduction in environmental sampling has been figured in with Trigger Point "Completion of Hot Cells (JN1)".

The table below lists the proposed reductions based on current knowledge of baseline activities. Should the BCLDP make changes to the current sampling list, and/or the RAL start analyzing off-site samples (e.g., West Valley) then more Radioanalytical Laboratory oversight may be required.

Trigger Point	RAL Support FTEs Required	% of Current Effort	% Reduction from Previous Trigger Point
Current Program (FY 03)	2.96	100	N/A
Completion of Hot Cells (JN1)	2.24	76	24
Last year of Project	1.51	67	33

**Completed by:** Gretchen Farnung

**Date:** 6/10/02

**Rev. No.:** 3

## WBS 784 Radiation Protection

☒ FY 03 ☒ FY 04

**Trigger point:** Current (until JN-1 demolition approximately 60% complete)

**WBS Number:** 784

**Activity Number:** 784A

**Activity Title:** Radiation Protection

**Work Package Number:** 784-A03, -A04

**Work Package Title:** Radiation Protection

**Work Package Description:** Maintain a radiation protection program in accordance with NRC regulations, NRC license and other applicable requirements and guidance (e.g., DOE, State of Ohio).

### Basis of Estimate

**Strategy for Accomplishing Task:** Ensure the radiation protection program is compliant with regulatory standards in protecting the workers, the public, and the environment.

#### Applicable Requirements/Procedures:

1. NRC regulations and guidance
2. NRC Radioactive Materials License (SNM-7)
3. Applicable State of Ohio regulations and DOE guidance

#### Input Descriptions:

1. N/A

#### Output Descriptions:

1. ALARA – goals description, annual program status report, annual document control package, quarterly status reports, quarterly PIC vs. TLD comparison, quarterly multi-badge evaluation, monthly report, monthly temporary shielding inventory, surveillances as needed
2. Procedures/Plans– generate new health physics procedures/plans as needed, revise existing health physics procedures/plans as needed, review procedures/plans (technical and HP-AP-36.0) as needed
3. Self-assessments/surveillances/programmatic audits
4. Radiological Awareness Reports (RARs)

#### Assumptions:

1. Work in radiological areas will remain level until JN-1 demolition is approximately 60% complete.
2. Technical support (labor hours) directly related to a specific Work Instruction (e.g., RWPs) will be charged to that work package number.
3. Labor hours for licensing (NRC and State of Ohio) actions will be charged to a separate account.
4. The Radiological Technical Support Manager and ALARA Coordinator positions will be filled with appropriately qualified individuals before the budget period starts.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

## WBS 784 Radiation Protection

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year and will be constant over the life of the project.

### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	N/A	N/A	N/A
Manager/Senior Staff	HBB	0.13/year/240	N/A	N/A
Technical Advisors	HBTA	1.07/year/1969	N/A	N/A
Project Manager/HP Manager	HBPM	0.92/year/1693	N/A	N/A
Task Leader	HBTL	N/A	N/A	N/A
Battelle Technician	HBT	N/A	N/A	N/A
Battelle Technician O/T	HBTO	N/A	N/A	N/A
RAL Staff	HBL	N/A	N/A	N/A
Support Professional	HBP	0.15/year/276	N/A	N/A
Secretary/Clerical	HBS	0.05/year/92	N/A	N/A
Decon Ops Hourly	HBH	0.52/year/957	N/A	N/A
BCO Support	HBCO	N/A	N/A	N/A
BCO Skilled Laborer	HCE	N/A	N/A	N/A
BCO Skilled Laborer O/T	HCEO	N/A	N/A	N/A
BCO Facility Manager	HCF	N/A	N/A	N/A
Bartlett Technician	HRD	0.20/year/380	N/A	N/A
Bartlett Maint Specialist	HRDS	N/A	N/A	N/A
Bartlett Health Physics	HRH	0.51/year/969	N/A	N/A
Bartlett Admin Support	HRA	N/A	N/A	N/A

**Subcontract/Purchased Service:** No extraordinary items anticipated.

**Special Equipment/Material:** No extraordinary items anticipated.



## WBS 784 Radiation Protection

### Comments/Explanations:

**Basis of Estimate:**

**What is the estimator's experience?** 10 years experience in radiation protection under NRC.

**What experience is directly related to BCLDP?** 2 years direct BCLDP experience; Ancillary involvement with BCLDP Radiation Protection.

**Did we apply a complexity factor during our thought process?** No

**Completed by:** Robert J. Friedman III

**Date:** 6/19/02

**Rev. No.:** 0

# WBS 784 Radiation Protection

Labor Code	% time	# hours	# days/week	Comments
HBTA	0.98	1803	5	RTS Manager (Vacant)
HBTA	0.09	166	5	RSO
<b>Total Hours</b>		<b>1969</b>		
HBPM	0.92	1693	5	ALARA Coordinator (Vacant)
<b>Total Hours</b>		<b>1693</b>		
HBB	0.13	240	5	Special Tech Support/Alara
<b>Total Hours</b>		<b>240</b>		
HBP	0.15	276	5	Computer Applications
<b>Total Hours</b>		<b>276</b>		
HBH	0.52	957	5	Tech Support/Spec Projects
<b>Total Hours:</b>		<b>957</b>		
HBS	0.05	92	5	Administrative Support
<b>Total Hours:</b>		<b>92</b>		
HRH	0.51	969	5	ALARA Technician
<b>Total Hours:</b>		<b>969</b>		
HRD	0.20	380	5	Technician
<b>Total Hours:</b>		<b>380</b>		

# WBS 784 Radiation Protection

Activity	#FTE	Labor Category
Document control	0.010	HBS
Procedures – new and revisions	0.040	
<b>Total HBS</b>	<b>0.050</b>	
ALARA Surveillances/Audits	0.250	HRH
Dose tracking	0.100	
Dose Trending	0.020	
ALARA Document control	0.020	
ALARA Reports	0.120	
<b>Total HRH</b>	<b>0.510</b>	
Radiation protection program development and maintenance	0.050	HBB
General technical support	0.050	
Procedures – new and revisions	0.020	
Document reviews – procedures, plans, etc	0.010	
<b>Total HBB</b>	<b>0.130</b>	
ALARA Coordination/program maintenance	0.400	HBPM
Radiation protection program development and maintenance	0.050	
General technical support	0.050	
Procedures – new and revisions	0.050	
Document reviews – procedures, plans, etc	0.030	
Data review – TLD results, bioassay results, etc	0.010	
Dose assessments	0.180	
RAR program maintenance	0.100	
Self-assessments/surveillances/audits	0.050	
<b>Total HBPM</b>	<b>0.920</b>	
Computer applications support and development	0.150	HBP
<b>Total HBP</b>	<b>0.150</b>	
Document control/general administrative support	0.100	HRD
Procedures – new and revisions	0.100	
<b>Total HRD</b>	<b>0.200</b>	
Radiation protection program development and maintenance	0.150	HBTA
General technical support	0.200	
Procedures – new and revisions	0.200	
Document reviews – procedures, plans, etc.	0.100	
Data review – TLD results, bioassay results, etc.	0.100	
Dose assessments	0.020	
Self-assessments/surveillances/audits	0.100	
WBS management	0.010	
Management functions	0.100	
<b>Total HBTA1</b>	<b>0.980</b>	
Radiation protection program development and maintenance	0.050	
General technical support	0.010	
Document reviews – procedures, plans, etc.	0.020	
Self-assessments/surveillances/audits	0.010	
<b>Total HBTA2</b>	<b>0.090</b>	
Radiation protection program development and maintenance	0.100	HBH
General technical support/special projects	0.250	
Procedures – new and revisions	0.150	
RAR program maintenance	0.020	
<b>Total HBH</b>	<b>0.520</b>	
<b>Total RTS FTE</b>	<b>3.550</b>	
<b>Total HBTA</b>	<b>1.070</b>	
<b>Total HBPM</b>	<b>0.920</b>	
<b>Total HRD</b>	<b>0.200</b>	
<b>Total HBH</b>	<b>0.520</b>	
<b>Total HBP</b>	<b>0.150</b>	
<b>Total HBS</b>	<b>0.050</b>	
<b>Total HBB</b>	<b>0.130</b>	
<b>Total HRH</b>	<b>0.510</b>	

## WBS 784 Radiation Protection

☒ FY 05

**WBS Number:** 784

**Activity Number:** 784B

**Activity Title:** Radiation Protection

**Work Package Number:** 784-A05

**Work Package Title:** Radiation Protection

**Work Package Description:** Maintain a radiation protection program in accordance with NRC regulations, NRC license and other applicable requirements and guidance (e.g., DOE, State of Ohio).

### Basis of Estimate

**Strategy for Accomplishing Task:** Ensure the radiation protection program is compliant with regulatory standards in protecting the workers, the public, and the environment.

#### Applicable Requirements/Procedures:

1. NRC regulations and guidance
2. NRC Radioactive Materials License (SNM-7)
3. Applicable State of Ohio regulations and DOE guidance

#### Input Descriptions:

1. N/A

#### Output Descriptions:

1. ALARA – goals description, annual program status report, annual document control package, quarterly status reports, quarterly PIC vs. TLD comparison, quarterly multi-badge evaluation, monthly report, monthly temporary shielding inventory, surveillances as needed
2. Procedures/Plans– generate new health physics procedures/plans as needed, revise existing health physics procedures/plans as needed, review procedures/plans (technical and HP-AP-36.0) as needed
3. Self-assessments/surveillances/programmatic audits
4. Radiological Awareness Reports (RARs)

#### Assumptions:

1. Work in radiological areas will remain level until JN-1 demolition is approximately 60% complete.
2. Technical support (labor hours) directly related to a specific Work Instruction (e.g., RWPs) will be charged to that work package number.
3. Labor hours for licensing (NRC and State of Ohio) actions will be charged to a separate account.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

## WBS 784 Radiation Protection

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year and will be constant over the life of the project.

### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	N/A	N/A	N/A
Manager/Senior Staff	HBB	0.10/year/180	N/A	N/A
Technical Advisors	HBTA	0.98/year/1804	N/A	N/A
Project Manager/HP Manager	HBPM	0.71/year/1306	N/A	N/A
Task Leader	HBTL	N/A	N/A	N/A
Battelle Technician	HBT	N/A	N/A	N/A
Battelle Technician O/T	HBTO	N/A	N/A	N/A
RAL Staff	HBL	N/A	N/A	N/A
Support Professional	HBP	0.15/year/276	N/A	N/A
Secretary/Clerical	HBS	0.05/year/92	N/A	N/A
Decon Ops Hourly	HBH	0.45/year/828	N/A	N/A
BCO Support	HBCO	N/A	N/A	N/A
BCO Skilled Laborer	HCE	N/A	N/A	N/A
BCO Skilled Laborer O/T	HCEO	N/A	N/A	N/A
BCO Facility Manager	HCF	N/A	N/A	N/A
Bartlett Technician	HRD	0.20/year/380	N/A	N/A
Bartlett Maint Specialist	HRDS	N/A	N/A	N/A
Bartlett Health Physics	HRH	0.41/year/779	N/A	N/A
Bartlett Admin Support	HRA	N/A	N/A	N/A

**Subcontract/Purchased Service:** No extraordinary items anticipated.

**Special Equipment/Material:** No extraordinary items anticipated.

## WBS 784 Radiation Protection

### Comments/Explanations:

**Basis of Estimate:**

**What is the estimator's experience?** 10 years experience in radiation protection under NRC.

**What experience is directly related to BCLDP?** 2 years direct BCLDP experience; Ancillary involvement with BCLDP Radiation Protection.

**Did we apply a complexity factor during our thought process?** No

**Completed by:** Robert J. Friedman III

**Date:** 6/19/02

**Rev. No.:** 0

# WBS 784 Radiation Protection

Labor Code	% time	# hours	# days/week	Comments
HBTA	0.89	1638	5	RTS Manager (Vacant)
HBTA	0.09	166	5	RSO
<b>Total Hours</b>		<b>1804</b>		
HBPM	0.71	1306	5	ALARA Coordinator (Vacant)
<b>Total Hours</b>		<b>1306</b>		
HBB	0.10	180	5	Special Tech Support/Alara
<b>Total Hours</b>		<b>180</b>		
HBP	0.15	276	5	Computer Applications
<b>Total Hours</b>		<b>276</b>		
HBH	0.45	828	5	Tech Support/Spec Projects
<b>Total Hours:</b>		<b>828</b>		
HBS	0.05	92	3	Administrative Support
<b>Total Hours:</b>		<b>92</b>		
HRH	0.41	779	5	ALARA Technician
<b>Total Hours:</b>		<b>779</b>		
HRD	0.20	380	3	Technician
<b>Total Hours:</b>		<b>380</b>		

# WBS 784 Radiation Protection

Activity	#FTE	Labor Category
Document control	0.010	HBS
Procedures – new and revisions	0.040	
<b>Total HBS</b>	<b>0.050</b>	
ALARA Surveillances/Audits	0.150	HRH
Dose tracking	0.100	
Dose Trending	0.020	
ALARA Document control	0.020	
ALARA Reports	0.120	
<b>Total HRH</b>	<b>0.410</b>	
Radiation protection program development and maintenance	0.050	HBB
General technical support	0.050	
<b>Total HBB</b>	<b>0.100</b>	
ALARA Coordination/program maintenance	0.300	HBPM
Radiation protection program development and maintenance	0.050	
General technical support	0.050	
Procedures – new and revisions	0.050	
Document reviews – procedures, plans, etc	0.030	
Data review – TLD results, bioassay results, etc	0.010	
Dose assessments	0.100	
RAR program maintenance	0.070	
Self-assessments/surveillances/audits	0.050	
<b>Total HBPM</b>	<b>0.710</b>	
Computer applications support and development	0.150	HBP
<b>Total HBP</b>	<b>0.150</b>	
Document control/general administrative support	0.100	HRD
Procedures – new and revisions	0.100	
<b>Total HRD</b>	<b>0.200</b>	
Radiation protection program development and maintenance	0.150	HBTA
General technical support	0.200	
Procedures – new and revisions	0.200	
Document reviews – procedures, plans, etc.	0.070	
Data review – TLD results, bioassay results, etc.	0.070	
Dose assessments	0.020	
Self-assessments/surveillances/audits	0.070	
WBS management	0.010	
Management functions	0.100	
<b>Total HBTA 1</b>	<b>0.890</b>	
Radiation protection program development and maintenance	0.050	
General technical support	0.010	
Document reviews – procedures, plans, etc.	0.020	
Self-assessments/surveillances/audits	0.010	
<b>Total HBTA 2</b>	<b>0.090</b>	
Radiation protection program development and maintenance	0.100	HBH
General technical support/special projects	0.250	
Procedures – new and revisions	0.080	
RAR program maintenance	0.020	
<b>Total HBH</b>	<b>0.450</b>	
<b>Total RTS FTE</b>	<b>3.050</b>	
<b>Total HBTA</b>	<b>0.980</b>	
<b>Total HBPM</b>	<b>0.710</b>	
<b>Total HRD</b>	<b>0.200</b>	
<b>Total HBH</b>	<b>0.450</b>	
<b>Total HBP</b>	<b>0.150</b>	
<b>Total HBS</b>	<b>0.050</b>	
<b>Total HBB</b>	<b>0.100</b>	
<b>Total HRH</b>	<b>0.410</b>	



## WBS 784 Radiation Protection

☒ **FY 06** after buildings Demolished through Externals completed

**WBS Number:** 784

**Activity Number:** 784C

**Activity Title:** Radiation Protection

**Work Package Number:** 784-A06

**Work Package Title:** Radiation Protection

**Work Package Description:** Maintain a radiation protection program in accordance with NRC regulations, NRC license and other applicable requirements and guidance (e.g., DOE, State of Ohio).

### Basis of Estimate

**Strategy for Accomplishing Task:** Ensure the radiation protection program is compliant with regulatory standards in protecting the workers, the public, and the environment.

#### Applicable Requirements/Procedures:

1. NRC regulations and guidance
2. NRC Radioactive Materials License (SNM-7)
3. Applicable State of Ohio regulations and DOE guidance

#### Input Descriptions:

1. N/A

#### Output Descriptions:

1. ALARA – goals description, annual program status report, annual document control package, quarterly status reports, quarterly PIC vs. TLD comparison, quarterly multi-badge evaluation, monthly report, monthly temporary shielding inventory, surveillances as needed
2. Procedures/Plans– generate new health physics procedures/plans as needed, revise existing health physics procedures/plans as needed, review procedures/plans (technical and HP-AP-36.0) as needed
3. Self-assessments/surveillances/programmatic audits
4. Radiological Awareness Reports (RARs)

#### Assumptions:

1. Work in radiological areas is minimal once JN-1 dismantlement/demolition is complete.
2. Technical support (labor hours) directly related to a specific Work Instruction (e.g., RWPs) will be charged to that work package number.
3. Labor hours for licensing (NRC and State of Ohio) actions will be charged to a separate account.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

## WBS 784 Radiation Protection

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year and will be constant over the life of the project.

### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	N/A	N/A	N/A
Manager/Senior Staff	HBB	N/A	N/A	N/A
Technical Advisors	HBTA	.85/year/1564	N/A	N/A
Project Manager/HP Manager	HBPM	N/A	N/A	N/A
Task Leader	HBTL	N/A	N/A	N/A
Battelle Technician	HBT	N/A	N/A	N/A
Battelle Technician O/T	HBTO	N/A	N/A	N/A
RAL Staff	HBL	N/A	N/A	N/A
Support Professional	HBP	0.1/year/184	N/A	N/A
Secretary/Clerical	HBS	N/A	N/A	N/A
Decon Ops Hourly	HBH	N/A	N/A	N/A
BCO Support	HBCO	N/A	N/A	N/A
BCO Skilled Laborer	HCE	N/A	N/A	N/A
BCO Skilled Laborer O/T	HCEO	N/A	N/A	N/A
BCO Facility Manager	HCF	N/A	N/A	N/A
Bartlett Technician	HRD	0.1/year/190	N/A	N/A
Bartlett Maint Specialist	HRDS	N/A	N/A	N/A
Bartlett Health Physics	HRH	N/A	N/A	N/A
Bartlett Admin Support	HRA	N/A	N/A	N/A

**Subcontract/Purchased Service:** No extraordinary items anticipated.

**Special Equipment/Material:** No extraordinary items anticipated.

## WBS 784 Radiation Protection

### Comments/Explanations:

**Basis of Estimate:**

**What is the estimator's experience?** 10 years experience in radiation protection under NRC and DOE and 9.5 years total BCLDP project-related experience.

**What experience is directly related to BCLDP?** 3.25 years BCLDP radiation protection.

**Did we apply a complexity factor during our thought process?** No

**Completed by:** Tina P. Amstein

**Date:** 06/11/2001

**Rev. No.:** 0

# WBS 784 Radiation Protection

Labor Code	% time	# hours	# days/week	Comments
HBTA	0.85	1564	5	RSO
<b>Total Hours</b>		<b>1564</b>		
HBP	0.10	184	5	Computer Applications
<b>Total Hours</b>		<b>184</b>		
HRD	0.10	190	5	Technician
<b>Total Hours:</b>		<b>190</b>		

# WBS 784 Radiation Protection

Activity	#FTE	Name	Labor Category
Computer applications support and development	0.100	Mohler	HBP
<b>Total HBP</b>	<b>0.100</b>		
Document control/general administrative support	0.080	Tose	HRD
Procedures – new and revisions	0.020	Tose	
<b>Total HRD</b>	<b>0.100</b>		
Radiation protection program maintenance	0.150	Jensen or RTS Vacant	HBTA
General technical support	0.100	Jensen or RTS Vacant	
Procedures – new and revisions	0.050	Jensen or RTS Vacant	
Document reviews – procedures, plans, etc.	0.100	Jensen or RTS Vacant	
Data review – TLD results, bioassay results, etc.	0.050	Jensen or RTS Vacant	
Dose assessments	0.020	Jensen or RTS Vacant	
Self-assessments/surveillances/audits	0.050	Jensen or RTS Vacant	
ALARA Coordination/program maintenance	0.150	Jensen or RTS Vacant	
ALARA Reports	0.020	Jensen or RTS Vacant	
RAR program maintenance	0.050	Jensen or RTS Vacant	
WBS management	0.010	Jensen or RTS Vacant	
Management functions	0.100	Jensen or RTS Vacant	
<b>Total HBTA</b>	<b>0.850</b>		
<b>Total RTS FTE</b>	<b>1.050</b>		

☒ FY 05 ☒ FY 07

**Valid:** Years of license renewal; first renewal will be in CY05 (current renewal due in 11/05); also use for year of license termination

**WBS Number:** 784

**Activity Number:** 784E

**Activity Title:** Radiation Protection

**Work Package Number:** 784-F05, -F07

**Work Package Title:** Radiation Protection – Regulatory Activities, Inspections, and Fees

**Work Package Description:** Perform activities related to the NRC Decommissioning License, including correspondence with regulatory agencies and inspections; pay regulatory inspection and fees associated with NRC licensed activities at West Jefferson under BCLDP.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Ensure regulatory license requirements are adequate to meet BCLDP decommissioning needs; ensure that all applicable licensing and inspection fees are remitted to appropriate agency in a timely manner.

#### **Applicable Requirements/Procedures:**

1. NRC Radioactive Materials License (SNM-7)

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. License renewal application, license amendments, and other correspondence
2. Response to and resolution of NRC comments on renewal application
3. Inspection support
4. Inspection report responses
5. Payment of fees related to maintenance of NRC/State of Ohio license and regulatory inspections of licensed activities
6. Annual NRC Decommissioning Financial Assurance Certification
7. NRC Independent Verification of Final Status Surveys (Concurrent with ORISE IVC)
8. Support for NRC Final Status and License Termination Package Comment Resolution

#### **Assumptions:**

1. NRC Decommissioning licensing actions remain 100% cost recovery in lieu of annual fees
2. Contingent resources available to provide additional support for license renewal as necessary.
3. State of Ohio license establishment, maintenance, and regulatory inspections of licensed activities for RAL not included

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work: N/A**

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year and will be constant over the life of the project.

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	N/A	N/A	N/A
Manager/Senior Staff	HBB	N/A	N/A	N/A
Technical Advisors	HBTA	1/year/400	N/A	N/A
Project Manager/HP Manager	HBPM	N/A	N/A	N/A
Task Leader	HBTL	N/A	N/A	N/A
Battelle Technician	HBT	N/A	N/A	N/A
Battelle Technician O/T	HBTO	N/A	N/A	N/A
RAL Staff	HBL	N/A	N/A	N/A
Support Professional	HBP	N/A	N/A	N/A
Secretary/Clerical	HBS	1/year/46	N/A	N/A
Decon Ops Hourly	HBH	N/A	N/A	N/A
BCO Support	HBCO	N/A	N/A	N/A
BCO Skilled Laborer	HCE	N/A	N/A	N/A
BCO Skilled Laborer O/T	HCEO	N/A	N/A	N/A
BCO Facility Manager	HCF	N/A	N/A	N/A
Bartlett Technician	HRD	1/year/95	N/A	N/A
Bartlett Maint Specialist	HRDS	N/A	N/A	N/A
Bartlett Health Physics	HRH	2/year/180	N/A	N/A
Bartlett Admin Support	HRA	N/A	N/A	N/A

**Subcontract/Purchased Service:** See attachment.

**Special Equipment/Material:** No extraordinary items anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 18 years experience in radiation protection under NRC, DOE and Ohio Agreement State

**What experience is directly related to BCLDP?** 10 years direct BCLDP experience; 10 year as RSO or Associate RSO; 8 years as Radiological Technical Support Manager;

**Did we apply a complexity factor during our thought process** Trigger points are NRC License renewal submittal dates that are set by the NRC at the time of license approval; also year of license termination, NRC Independent Verification of Final Status Surveys in FY 07 and approval of release packages

**Completed by:** Craig E. Jensen

**Date:** 06/19/2002

**Rev. No.:** 1



Labor Code	% Time	# hours	# days/week	Comments
HBTA	0.217	400	5	RSO
<b>TOTAL HOURS</b>		<b>700</b>		
HBS	0.025	46	5	Administrative Support
<b>TOTAL HOURS</b>		<b>46</b>		
HRD	0.05	95	5	Technician
HRH	0.10	190	5	HP Technician - Escort
<b>TOTAL HOURS</b>		<b>285</b>		

Estimate of inspection fees for NRC:

$$Fee \text{ per Inspection} \approx \left[ (I) \times \left( (D) \times \frac{8 \text{ hr}}{\text{day}} \right) + (T) + (PR) \right] \times \frac{\$152}{\text{hr}}$$

Where:

I = number of inspectors

D = inspection duration (days)

T = travel time (hours)

PR = inspection preparation and report-writing (hours)

$$Fee \text{ per Inspection} \approx \left[ (2.0) \times \left( \left( (3 \text{ days}) \times \frac{8 \text{ hr}}{\text{day}} \right) + (5 \text{ hr}) + (8 \text{ hr}) \right) \right] \times \frac{\$152}{\text{hr}} \approx \$11,248$$

Expected number of inspections per year = 4

**Total inspection fee per year = 4 × \$11,248 = \$44,992**

Estimate of licensing fees for NRC:

These costs represent actual hours invoiced at Federal Register noticed rates for license-related correspondence, amendments, and other actions, in lieu of an annual fee.

Total Licensing Fees per year ≈ 200 hours × \$152/hour

**Total licensing fees per year = \$30,400**

**Total all licensing fees = \$79,727/year**

**NOTE: For 07 only, there is an additional expense associated with NRC Independent On-site Verification of Final Status Surveys, 3 each year, and review approval of license termination documents.**

Additional NRC Fees per year ≈ 200 hours × \$152/hour

**Additional NRC fees per year = \$32,148**

**Total all licensing fees FY 07 = \$105,792/year**

☒ FY 03 ☒ FY 04 ☒ FY 06

**Valid:** Each year until license termination, except years of license renewal (every 5 years) and year of license termination.

**WBS Number:** 784

**Activity Number:** 784F

**Activity Title:** Radiation Protection

**Work Package Number:** 784-F03, -F04, -F06

**Work Package Title:** Radiation Protection – Regulatory Activities, Inspections, and Fees

**Work Package Description:** Perform activities related to the NRC Decommissioning License, including correspondence with regulatory agencies and inspections; pay regulatory inspection and fees associated with NRC licensed activities at West Jefferson under BCLDP.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Ensure regulatory license requirements are adequate to meet BCLDP decommissioning needs; ensure that all applicable licensing and inspection fees are remitted to appropriate agency in a timely manner.

#### **Applicable Requirements/Procedures:**

1. NRC Radioactive Materials License (SNM-7)

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. License renewal application, license amendments, and other correspondence
2. Response to and resolution of NRC comments on renewal application
3. Inspection support
4. Inspection report responses
5. Payment of fees related to maintenance of NRC license and regulatory inspections of licensed activities
6. Annual NRC Decommissioning Financial Assurance Certification
7. NRC Independent Verification of Final Status Surveys (Concurrent with ORISE IVC)
8. Support for NRC Final Status and License Termination Package Comment Resolution

#### **Assumptions:**

1. NRC Decommissioning licensing actions remain 100% cost recovery in lieu of annual fees
2. Contingent resources available to provide additional support for license renewal as necessary.
3. State of Ohio license establishment, maintenance, and regulatory inspections of licensed activities for RAL not included

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work: N/A**

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year and will be constant over the life of the project.

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	N/A	N/A	N/A
Manager/Senior Staff	HBB	N/A	N/A	N/A
Technical Advisors	HBTA	1/year/300	N/A	N/A
Project Manager/HP Manager	HBPM	N/A	N/A	N/A
Task Leader	HBTL	N/A	N/A	N/A
Battelle Technician	HBT	N/A	N/A	N/A
Battelle Technician O/T	HBTO	N/A	N/A	N/A
RAL Staff	HBL	N/A	N/A	N/A
Support Professional	HBP	N/A	N/A	N/A
Secretary/Clerical	HBS	1/year/46	N/A	N/A
Decon Ops Hourly	HBH	N/A	N/A	N/A
BCO Support	HBCO	N/A	N/A	N/A
BCO Skilled Laborer	HCE	N/A	N/A	N/A
BCO Skilled Laborer O/T	HCEO	N/A	N/A	N/A
BCO Facility Manager	HCF	N/A	N/A	N/A
Bartlett Technician	HRD	N/A	N/A	N/A
Bartlett Maint Specialist	HRDS	N/A	N/A	N/A
Bartlett Health Physics	HRH	2/year/180	N/A	N/A
Bartlett Admin Support	HRA	N/A	N/A	N/A

**Subcontract/Purchased Service:** See attachment.

**Special Equipment/Material:** No extraordinary items anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 18 years experience in radiation protection under NRC, DOE and Ohio Agreement State

**What experience is directly related to BCLDP?** 10 years direct BCLDP experience; 10 year as RSO or Associate RSO; 8 years as Radiological Technical Support Manager;

**Did we apply a complexity factor during our thought process** Trigger points are NRC Independent Verification of Final Status Surveys in FY 06

**Completed by:** Craig E. Jensen

**Date:** 06/19/2002

**Rev. No.:** 1

Labor Code	% time	# hours	# days/week	Comments
HBT A	0.163	300	5	RSO
<b>TOTAL HOURS</b>		<b>450</b>		
HBS	0.025	46	5	Administrative Support
<b>TOTAL HOURS</b>		<b>46</b>		
HRH	0.10	180		HP Technician
<b>TOTAL HOURS</b>		<b>180</b>		

Estimate of inspection fees for NRC:

$$Fee \text{ per Inspection} \approx \left[ (I) \times \left( (D) \times \frac{8 \text{ hr}}{\text{day}} \right) + (T) + (PR) \right] \times \frac{\$152}{\text{hr}}$$

Where:

I = number of inspectors

D = inspection duration (days)

T = travel time (hours)

PR = inspection preparation and report-writing (hours)

$$Fee \text{ per Inspection} \approx \left[ (2.0) \times \left( \left( (3 \text{ days}) \times \frac{8 \text{ hr}}{\text{day}} \right) + (5 \text{ hr}) + (8 \text{ hr}) \right) \right] \times \frac{\$152}{\text{hr}} \approx \$11,248$$

Expected number of inspections per year = 4

**Total inspection fee per year = 4 × \$11,248 = \$44,492**

Estimate of licensing fees for NRC:

These costs represent actual hours invoiced at Federal Register noticed rates for license-related correspondence, amendments, and other actions, in lieu of an annual fee.

Total Licensing Fees per year ≈ 100 hours × \$152/hour

**Total licensing fees per year = \$15,200**

**Total all licensing fees = \$63,653/year**

**NOTE: For FY 06 only, there is an additional expense associated with NRC Independent On-site Verification of Final Status Surveys, 3 each year**

Additional NRC Fees per year ≈ 100 hours × \$152/hour

**Additional NRC fees per year = \$16,074**

**Total all licensing fees FY 06 = \$75,392/year**

☒ FY 03 ☒ FY 04

**Trigger Point:** FY03 through FY04 in which JN-1 demolition begins

**WBS Number:** 784

**Activity Number:** 784G

**Activity Title:** TLD's and Bioassays

**Work Package Number:** 784-B03, -B04

**Work Package Title:** TLD's and Bioassays

**Work Package Description:** Maintain a TLD and bioassay program in compliance with regulatory requirements for dosimetry services for monitoring requirements for exposure to radioactive materials as stated in 10CFR20.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Ensure compliance with internal and external dose monitoring and measurement requirements of the NRC.

#### **Applicable Requirements/Procedures:**

1. NRC requirements and guidelines
2. 10CFR20

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Daily activities of TLD issuance and accountability
2. Quarterly TLD change-out
3. Quarterly DOE occupational exposure reports
4. Monthly bioassay processing (each worker once or twice per year)
5. Annual dose reports for each affected worker (NRC form 5)

#### **Assumptions:**

1. TLD/Bioassay schedules will remain the same.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Other Detailed Costs:** See Bioassay and TLD Breakdowns

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** 10 years experience in radiation protection under NRC and DOE and 9.5 years total BCLDP project-related experience.

**What experience is directly related to BCLDP?** 3.25 years BCLDP radiation protection.

**Did we apply a complexity factor during our thought process?** No

**Completed by:** Tina P. Amstein

**Date:** 06/11/2002

**Rev. No.:** 0



**WBS 7.8.4 FY 03**

	<b>TOTAL</b>	<b>1<sup>st</sup> Qtr</b>	<b>2<sup>nd</sup> Qtr</b>	<b>3<sup>rd</sup> Qtr</b>	<b>4<sup>th</sup> Qtr</b>
BATTELLE TLD WJ	\$49,640	\$12,410	\$12,410	\$12,410	\$12,410
B TLD KA	\$0	\$0.00	\$0.00	\$0.00	
RINGS TLD WJ	\$24,480	\$6,120	\$6,120	\$6,120	\$6,120
R TLD WJ	\$10,200	\$2,550	\$2,550	\$2,550	\$2,550
CONTRACTOR TLD WJ	\$19,380	\$4,845	\$4,845	\$4,845	\$4,845
C TLD WJ	\$0	\$0.00			
EVIR TLD	\$0	\$0.00			
EM TLD	\$6,800	\$1,700	\$1,700	\$1,700	\$1,700
WHOLE BODY	\$10,230	\$5,115		\$5,115	
MULTIPACKS -TLD	\$30,600	\$7,650	\$7,650	\$7,650	\$7,650
QTR SPRD TOTAL	\$151,330	<b>\$40,390</b>	<b>\$35,275</b>	<b>\$40,390</b>	<b>\$35,275</b>

EVEN SPEAD 12Mo **\$90,580**

WP Total \$241,910

**WBS 7.8.4 FY 04**

	<b>TOTAL</b>	<b>1<sup>st</sup> Qtr</b>	<b>2<sup>nd</sup> Qtr</b>	<b>3<sup>rd</sup> Qtr</b>	<b>4<sup>th</sup> Qtr</b>
BATTELLE TLD WJ	\$49,640	\$12,410	\$12,410	\$12,410	\$12,410
B TLD KA	\$0	\$0.00	\$0.00	\$0.00	
RINGS TLD WJ	\$24,480	\$6,120	\$6,120	\$6,120	\$6,120
R TLD WJ	\$10,200	\$2,550	\$2,550	\$2,550	\$2,550
CONTRACTOR TLD WJ	\$19,380	\$4,845	\$4,845	\$4,845	\$4,845
C TLD WJ	\$0	\$0.00			
EVIR TLD	\$0	\$0.00			
EM TLD	\$6,800	\$1,700	\$1,700	\$1,700	\$1,700
WHOLE BODY	\$10,230	\$5,115		\$5,115	
MULTIPACKS -TLD	\$4,080	\$1,020	\$1,020	\$1,020	\$1,020
QTR SPRD TOTAL	\$124,810	<b>\$33,760</b>	<b>\$28,645</b>	<b>\$33,760</b>	<b>\$28,645</b>

EVEN SPEAD 12Mo **\$90,580**

WP Total \$215,390

☒ FY 05 ☒ FY 06

**Trigger Point:** JN-1 demolition begins to end of External Grounds

**WBS Number:** 784

**Activity Number:** 784H

**Activity Title:** TLD's and Bioassays

**Work Package Number:** 784-B05, -B06

**Work Package Title:** TLD's and Bioassays

**Work Package Description:** Maintain a TLD and bioassay program in compliance with regulatory requirements for dosimetry services for monitoring requirements for exposure to radioactive materials as stated in 10CFR20.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Ensure compliance with internal and external dose monitoring and measurement requirements of the NRC.

#### **Applicable Requirements/Procedures:**

1. NRC requirements and guidelines
2. 10CFR20

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Daily activities of TLD issuance and accountability
2. Quarterly TLD change-out
3. Quarterly DOE occupational exposure reports
4. Monthly bioassay processing (each worker once or twice per year)
5. Annual dose reports for each affected worker (NRC form 5)

#### **Assumptions:**

1. TLD/Bioassay schedules will remain the same.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:**

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA			N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Other Detailed Costs:** See Bioassay and TLD Breakdowns

**Special Equipment/Material:**

**Comments/Explanations:**

\  
**Basis of Estimate:**

**Basis of Estimate:**

**What is the estimator's experience?** 10 years experience in radiation protection under NRC and DOE and 9.5 years total BCLDP project-related experience.

**What experience is directly related to BCLDP?** 3.25 years BCLDP radiation protection.

**Did we apply a complexity factor during our thought process?** No

**Completed by:** Tina P. Amstein

**Date:** 06/11/2002

**Rev. No.:** 0

**WBS 7.8.4 FY 05**

	<b>TOTAL</b>	<b>1<sup>st</sup> Quarter</b>	<b>2<sup>nd</sup> Quarter</b>	<b>3<sup>rd</sup> Quarter</b>	<b>4<sup>th</sup> Quarter</b>
BATTELLE TLD WJ	\$49,640	\$12,410	\$12,410	\$12,410	\$12,410
B TLD KA	\$0	\$0.00	\$0.00	\$0.00	
RINGS TLD WJ	\$24,480	\$6,120	\$6,120	\$6,120	\$6,120
R TLD WJ	\$10,200	\$2,550	\$2,550	\$2,550	\$2,550
CONTRACTOR TLD WJ	\$19,380	\$4,845	\$4,845	\$4,845	\$4,845
C TLD WJ	\$0	\$0.00			
EVIR TLD	\$0	\$0.00			
EM TLD	\$6,800	\$1,700	\$1,700	\$1,700	\$1,700
WHOLE BODY	\$10,230	\$5,115		\$5,115	
MULTIPACKS -TLD	\$0	\$0	\$0	\$0	\$0
QTR SPRD TOTAL	\$120,730	\$32,740	\$27,625	\$32,740	\$27,625

EVEN SPEAD 12Mo **\$90,580**

WP Total FY 05 **\$211,310**

**WBS 7.8.4 FY 06**

	<b>TOTAL</b>	<b>1<sup>st</sup> Quarter</b>	<b>2<sup>nd</sup> Quarter</b>	<b>3<sup>rd</sup> Quarter</b>	<b>4<sup>th</sup> Quarter</b>
BATTELLE TLD WJ	\$14,960	\$3,740	\$3,740	\$3,740	\$3,740
B TLD KA	\$0	\$0.00	\$0.00	\$0.00	
RINGS TLD WJ	\$7,480	\$1,870	\$1,870	\$1,870	\$1,870
R TLD WJ	\$3,400	\$850	\$850	\$850	\$850
CONTRACTOR TLD WJ	\$5,780	\$1,445	\$1,445	\$1,445	\$1,445
C TLD WJ	\$0	\$0.00			
EVIR TLD	\$0	\$0.00			
EM TLD	\$2,040	\$510	\$510	\$510	\$510
WHOLE BODY	\$3,410	\$1,705		\$1,705	
MULTIPACKS -TLD	\$0	\$0	\$0	\$0	\$0
QTR SPRD TOTAL	\$37,070	\$10,120	\$8,415	\$10,120	\$8,415

EVEN SPEAD 12Mo **\$27,821**

WP Total for FY 06 **\$64,891**

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06

**WBS Number:** 784

**Activity Number:** 784 J

**Activity Title:** Emergency Preparedness

**Work Package Number:** D03, -D04, -D05, -D06

**Work Package Title:** Emergency Preparedness

**Work Package Description:** Maintain emergency management and response capability commensurate with hazards and vulnerabilities presented by nuclear decontamination and decommissioning tasks.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Maintain an emergency management and response capability based on the Incident Command System that is commensurate with project hazards.

### **Applicable Requirements/Procedures:**

1. Contractual agreement
2. Numerous regulations encompassing occupational safety and health standards, Department of Transportation, EPA standards, Water Pollution Control Act, and Ohio Administrative Code Regulations and Resource Conservation Recovery Act

### **Input Descriptions:**

1. N/A

### **Output Descriptions:**

1. An annually signed preplanned private/public sector unified command agreement
2. An annual, integrated, full participation emergency response exercise

### **Assumptions:**

1. Estimates based on past history and continual scope of work.
2. Technical Advisor:
  - ◆ Plan and conduct annual, integrated full scale emergency exercise 15%
  - ◆ Evaluate internal drills 5%
  - ◆ Provide emergency management and response training 5%
  - ◆ Attend public sector planning meetings 5%
  - ◆ Management assessments and walk downs
  - ◆ Conduct procedure and plan reviews/provide updates
  - ◆ Coordinate with BCO response functions 10%
3. Support Professional:
  - ◆ Plan and perform in an annual, integrated full scale emergency exercise 20%
  - ◆ Plan, conduct and document quarterly drills 10%
  - ◆ Coordinate with BCO response functions 5%
  - ◆ Attend public sector planning meetings 5%
  - ◆ Conduct procedure and plan reviews and revisions 5%
4. Bartlett Health Physics:
  - ◆ Plan and conduct monthly communication drills 5%

- ◆ Establish and maintain emergency management action item tracking system 15%
- ◆ Assist with planning and conducting quarterly drills 5%
- ◆ Provide emergency response training 5%

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work**

N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates will be constant throughout the life of the project. Estimates are on a per year basis.

**FY 03** Maintain current capability; a reduction in personnel time commitment will impact integration of the capability within Battelle and with the public sector

**Triggers**

**Source Term Eliminated:** reduce capability by 0.6 FTE/reduce training requirements of responders

**Buildings Demolished:** eliminate emergency management and response capability

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours			PPE/Laundry Group	Total Jumps
Program Manager	HBA				N/A	N/A
Manager/Senior Staff	HBB	<b>FY03, 04</b>	<b>FY05</b>	<b>FY06</b>	N/A	N/A
Technical Advisors	HBTA	1/ year/850	680	588	N/A	N/A
Project Manager/HP Manager	HBPM				N/A	N/A
Task Leader	HBTL				N/A	N/A
Battelle Technician	HBT				N/A	N/A
Battelle Technician O/T	HBTO				N/A	N/A
RAL Staff	HBL				N/A	N/A
Support Professional	HBP	2/ year/781	625	625	N/A	N/A
Secretary/Clerical	HBS				N/A	N/A
Decon Ops Hourly	HBH				N/A	N/A
BCO Support	HBCO				N/A	N/A
BCO Skilled Laborer	HCE				N/A	N/A

BCO Skilled Laborer O/T	HCEO			N/A	N/A
BCO Facility Manager	HCF			N/A	N/A
Bartlett Technician	HRD			N/A	N/A
Bartlett Maint Specialist	HRDS			N/A	N/A
Bartlett Health Physics	HRH	1/ year/570	456	364	N/A
Bartlett Admin Support	HRA			N/A	N/A

**Subcontract/Purchased Service:** No extraordinary items anticipated.

**Special Equipment/Material:** No extraordinary items anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

What is the estimator's experience? 11 years emergency management plus 13 years health physics

What experience is directly related to BCLDP? 15 years

Did we apply a complexity factor during our thought process? See assumptions and triggers.

**Completed by:** Gene Roe/ S. Rank

**Date:** 7/12/02

**Rev. No.:** 1



☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06

**WBS Number:** 784

**Activity Number:** 784K

**Activity Title:** Health and Safety

**Work Package Number:** 784-C03, -C04, -C05, -C06

**Work Package Title:** Health and Safety Meetings and Training

**Work Package Description:** Maintain an effective health and safety program for accident prevention and regulatory compliance. This is part of an overall accident prevention/safety program to meet the requirements of both DOE and OSHA 29CFR1910 and 29CFR1926.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide for safety and industrial hygiene coordination and training activities to support ongoing tasks of the BCLDP.

#### **Applicable Requirements/Procedures:**

1. DOE and OSHA 29CFR1910 and 29CFR1926

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Weekly operations/safety meetings and associated project wide training
2. Monthly radioanalytical laboratory inspections
3. DOE annual report on the status of the BCLDP safety program

#### **Assumptions:**

Technical Advisor (HBTA) duties:

1. Safety/Industrial Hygiene weekly safety meetings – 406 hours
2. Prepare DOE annual report.
3. Hazard Screening and Analysis Procedure, Forms, and Administration (actual work to be charged to projects).

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimate represents a full year and is constant over the life of the project.

#### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours		PPE/Laundry Group	Total Jumps
Program Manager	HBA				N/A
Manager/Senior Staff	HBB	<b>FY03-05</b>	<b>FY06</b>		N/A
Technical Advisors	HBTA	1 / year / 406	203		N/A
Project Manager/HP Manager	HBPM				N/A
Task Leader	HBTL				N/A
Battelle Technician	HBT				N/A
Battelle Technician O/T	HBTO				N/A
RAL Staff	HBL				N/A
Support Professional	HBP				N/A
Secretary/Clerical	HBS	1 / year / 220	110		N/A
Decon Ops Hourly	HBH				N/A
BCO Support	HBCO				N/A
BCO Skilled Laborer	HCE				N/A
BCO Skilled Laborer O/T	HCEO				N/A
BCO Facility Manager	HCF				N/A
Bartlett Technician	HRD				N/A
Bartlett Maint Specialist	HRDS				N/A
Bartlett Health Physics	HRH				N/A
Bartlett Admin Support	HRA				N/A

**Subcontract/Purchased Service:** Health & Safety Support 260 hrs x \$55.25/hr = \$14,365..

**Special Equipment/Material:** No extraordinary items are anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 29 years experience in the industrial health and safety (IH&S) field ranging from safety engineer to safety and loss prevention manager. Joined Battelle in 1986 as the safety and training coordinator and was assigned as a principal research scientist, in risk management and process safety in 1990.

**What experience is directly related to BCLDP?** Total of almost 10 years in the BCLDP as a D&D Regulatory Compliance Coordinator with emphasis on IH&S and fire protection, an industrial health and safety support specialist, and BCLDP Safety Officer.

**Did we apply a complexity factor during our thought process?** Limited to the separation of daily; basic, regulatory and programmatic IH&S; and the WBS, WI, checklist and field support participation. Estimates can be reduced by 50% in last year of the project when work has been reduced to externals clean up only.

**Completed by:** Doug Winemiller

**Date:** 7/16/01

**Rev. No.:** 2

☒ FY 03

**WBS Number:** 784

**Activity Number:** 784 L

**Activity Title:** Health and Safety

**Work Package Number:** 784-C03

**Work Package Title:** Health and Safety Oversight for Activities Associated with the JN-1 Office Area

**Work Package Description:** Maintain an effective health and safety program for accident prevention and regulatory compliance. This is part of an overall accident prevention/safety program to meet the requirements of both DOE and OSHA 29CFR1910 and 29CFR1926.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide for safety and industrial hygiene monitoring and surveillance activities to support ongoing tasks of the BCLDP.

#### **Applicable Requirements/Procedures:**

1. DOE and OSHA 29CFR1910 and 29CFR1926

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Daily safety and industrial hygiene activities
2. Training, surveillance and work instruction reviews and briefings

#### **Assumptions:**

Technical Advisor (HBTA) duties:

1. Asbestos sampling/abatement compliance reviews – 13 hours
2. Facility walkdowns – 72 hours
3. Lockout/tagout briefings and compliance reviews – 12 hours
4. Subcontractor briefings and job task reviews to include Fire/Hot Work Permits – 15 hours

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimate represents a full year until the JN-1 office is demolished.

#### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	1 / year / 112		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items are anticipated.

**Special Equipment/Material:** No extraordinary items are anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 29 years experience in the industrial health and safety (IH&S) field ranging from safety engineer to safety and loss prevention manager. Joined Battelle in 1986 as the safety and training coordinator and was assigned as a principal research scientist, in risk management and process safety in 1990.

**What experience is directly related to BCLDP?** Total of almost 10 years in the BCLDP as a D&D Regulatory Compliance Coordinator with emphasis on IH&S and fire protection, an industrial health and safety support specialist, and BCLDP Safety Officer.

**Did we apply a complexity factor during our thought process?** Limited to the separation of daily; basic, regulatory and programmatic IH&S; and the WBS, WI, checklist and field support participation.

**Completed by:** Doug Winemiller

**Date:** 5/23/01

**Rev. No.:** 1

☒ FY 03 ☒ FY 04 ☒ FY 05

**WBS Number:** 784

**Activity Number:** 784 M

**Activity Title:** Health and Safety

**Work Package Number:** 784-C03, -C04, -C05

**Work Package Title:** Health and Safety Oversight for Activities Associated with the JN-1A Area and WSS

**Work Package Description:** Maintain an effective health and safety program for accident prevention and regulatory compliance. This is part of an overall accident prevention/safety program to meet the requirements of both DOE and OSHA 29CFR1910 and 29CFR1926.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide for safety and industrial hygiene monitoring and surveillance activities to support ongoing tasks of the BCLDP.

#### **Applicable Requirements/Procedures:**

1. DOE and OSHA 29CFR1910 and 29CFR1926

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Daily safety and industrial hygiene activities
2. Training, surveillance and work instruction reviews and briefings

#### **Assumptions:**

Technical Advisor (HBTA) duties:

1. Asbestos sampling/abatement compliance reviews – 14 hours
2. Facility walkdowns – 72 hours
3. Confined space briefings and testings – 20 hours
4. Lockout/tagout briefings and compliance reviews – 12 hours
5. Industrial Hygiene testing to include lead, mercury, humidity/heat stress, noise level – 12 hours
6. Subcontractor briefings and job task reviews to include Fire/Hot Work Permits – 15 hours

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimate represents a full year through demolition of JN-1A and the WSS.

#### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	1 / year / 145		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items are anticipated.

**Special Equipment/Material:** No extraordinary items are anticipated.

**Comments/Explanations:**



**Basis of Estimate:**

**What is the estimator's experience?** Over 29 years experience in the industrial health and safety (IH&S) field ranging from safety engineer to safety and loss prevention manager. Joined Battelle in 1986 as the safety and training coordinator and was assigned as a principal research scientist, in risk management and process safety in 1990.

**What experience is directly related to BCLDP?** Total of almost 10 years in the BCLDP as a D&D Regulatory Compliance Coordinator with emphasis on IH&S and fire protection, an industrial health and safety support specialist, and BCLDP Safety Officer.

**Did we apply a complexity factor during our thought process?** Limited to the separation of daily, basic, regulatory and programmatic IH&S; and the WBS, WI, checklist and field support participation.

**Completed by:** Doug Winemiller

**Date:** 5/23/01

**Rev. No.:** 1

☒ FY 03 ☒ FY 04 ☒ FY 05

**WBS Number:** 784

**Activity Number:** 784N

**Activity Title:** Health and Safety

**Work Package Number:** 784-C03, -C04, -C05

**Work Package Title:** Health and Safety Oversight for Activities Associated with the JN-1B Area

**Work Package Description:** Maintain an effective health and safety program for accident prevention and regulatory compliance. This is part of an overall accident prevention/safety program to meet the requirements of both DOE and OSHA 29CFR1910 and 29CFR1926.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide for safety and industrial hygiene monitoring and surveillance activities to support ongoing tasks of the BCLDP.

#### **Applicable Requirements/Procedures:**

1. DOE and OSHA 29CFR1910 and 29CFR1926

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Daily safety and industrial hygiene activities
2. Training, surveillance and work instruction reviews and briefings

#### **Assumptions:**

Technical Advisor (HBTA) duties:

1. Asbestos sampling/abatement compliance reviews – 14 hours
2. Facility walkdowns – 72 hours
3. Confined space briefings and testings – 20 hours
4. Lockout/tagout briefings and compliance reviews – 12 hours
5. Industrial Hygiene testing to include lead, mercury, humidity/heat stress, noise level – 12 hours
6. Subcontractor briefings and job task reviews to include Fire/Hot Work Permits – 15 hours

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimate represents a full year through demolition of JN-1B.

#### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	1 / year / 145		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items are anticipated.

**Special Equipment/Material:** No extraordinary items are anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 29 years experience in the industrial health and safety (IH&S) field ranging from safety engineer to safety and loss prevention manager. Joined Battelle in 1986 as the safety and training coordinator and was assigned as a principal research scientist, in risk management and process safety in 1990.

**What experience is directly related to BCLDP?** Total of almost 10 years in the BCLDP as a D&D Regulatory Compliance Coordinator with emphasis on IH&S and fire protection, an industrial health and safety support specialist, and BCLDP Safety Officer.

**Did we apply a complexity factor during our thought process?** Limited to the separation of daily; basic, regulatory and programmatic IH&S; and the WBS, WI, checklist and field support participation.

**Completed by:** Doug Winemiller

**Date:** 5/23/01

**Rev. No.:** 1

☒ FY 03 ☒ FY 04

**WBS Number:** 784

**Activity Number:** 784 P

**Activity Title:** Health and Safety

**Work Package Number:** 784-C03, -C04

**Work Package Title:** Health and Safety Oversight for Activities Associated with JN-2

**Work Package Description:** Maintain an effective health and safety program for accident prevention and regulatory compliance. This is part of an overall accident prevention/safety program to meet the requirements of both DOE and OSHA 29CFR1910 and 29CFR1926.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide for safety and industrial hygiene monitoring and surveillance activities to support ongoing tasks of the BCLDP.

#### **Applicable Requirements/Procedures:**

1. DOE and OSHA 29CFR1910 and 29CFR1926

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Daily safety and industrial hygiene activities
2. Training, surveillance and work instruction reviews and briefings
3. Monthly radioanalytical laboratory inspections

#### **Assumptions:**

Technical Advisor (HBTA) duties:

1. Asbestos sampling/abatement compliance reviews – 14 hours
2. Facility walkdowns – 36 hours
3. Lockout/tagout briefings and compliance reviews – 12 hours
4. Industrial Hygiene testing to include lead, mercury, humidity/heat stress, noise level – 12 hours
5. Subcontractor briefings and job task reviews to include Fire/Hot Work Permits and Demolition Work Planning – 30 hours

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimate represents a full year through demolition of JN-2.

#### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	1 / year / 104		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items are anticipated.

**Special Equipment/Material:** No extraordinary items are anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 29 years experience in the industrial health and safety (IH&S) field ranging from safety engineer to safety and loss prevention manager. Joined Battelle in 1986 as the safety and training coordinator and was assigned as a principal research scientist, in risk management and process safety in 1990.

**What experience is directly related to BCLDP?** Total of almost 10 years in the BCLDP as a D&D Regulatory Compliance Coordinator with emphasis on IH&S and fire protection, an industrial health and safety specialist, and the BCLDP Safety Officer.

**Did we apply a complexity factor during our thought process?** Limited to the separation of daily; basic, regulatory and programmatic IH&S; and the WBS, WI, checklist and field support participation.

**Completed by:** Doug Winemiller

**Date:** 5/23/01

**Rev. No.:** 1

☒ FY 03 ☒ FY 04

**WBS Number:** 784

**Activity Number:** 784 Q

**Activity Title:** Health and Safety

**Work Package Number:** 784-C03, -C04

**Work Package Title:** Health and Safety Oversight for Activities Associated with JN-3

**Work Package Description:** Maintain an effective health and safety program for accident prevention and regulatory compliance. This is part of an overall accident prevention/safety program to meet the requirements of both DOE and OSHA 29CFR1910 and 29CFR1926.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide for safety and industrial hygiene monitoring and surveillance activities to support ongoing tasks of the BCLDP.

#### **Applicable Requirements/Procedures:**

1. DOE and OSHA 29CFR1910 and 29CFR1926

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Daily safety and industrial hygiene activities
2. Training, surveillance and work instruction reviews and briefings

#### **Assumptions:**

Technical Advisor (HBTA) duties:

1. Asbestos sampling/abatement compliance reviews – 14 hours
2. Facility walkdowns – 36 hours
3. Lockout/tagout briefings and compliance reviews – 12 hours
4. Industrial Hygiene testing to include lead, mercury, humidity/heat stress, noise level – 12 hours
5. Subcontractor briefings and job task reviews to include Fire/Hot Work Permits – 15 hours

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A



Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimate represents a full year through demolition of JN-3.

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	1 / year / 89		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items are anticipated.

**Special Equipment/Material:** No extraordinary items are anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 29 years experience in the industrial health and safety (IH&S) field ranging from safety engineer to safety and loss prevention manager. Joined Battelle in 1986 as the safety and training coordinator and was assigned as a principal research scientist, in risk management and process safety in 1990.

**What experience is directly related to BCLDP?** Total of almost 10 years in the BCLDP as a D&D Regulatory Compliance Coordinator with emphasis on IH&S and fire protection, an industrial health and safety specialist, and BCLDP Safety Officer.

**Did we apply a complexity factor during our thought process?** Limited to the separation of daily; basic, regulatory and programmatic IH&S; and the WBS, WI, checklist and field support participation.

**Completed by:** Doug Winemiller

**Date:** 5/23/01

**Rev. No.:** 1

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06

**WBS Number:** 784

**Activity Number:** 784 R

**Activity Title:** Health and Safety

**Work Package Number:** 784-C03, -C04, -C05, -C06

**Work Package Title:** Health and Safety Oversight for Activities Associated with WJN External Areas

**Work Package Description:** Maintain an effective health and safety program for accident prevention and regulatory compliance. This is part of an overall accident prevention/safety program to meet the requirements of both DOE and OSHA 29CFR1910 and 29CFR1926.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Provide for safety and industrial hygiene monitoring and surveillance activities to support ongoing tasks of the BCLDP.

#### **Applicable Requirements/Procedures:**

1. DOE and OSHA 29CFR1910 and 29CFR1926

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Daily safety and industrial hygiene activities
2. Training, surveillance and work instruction reviews and briefings

#### **Assumptions:**

Technical Advisor (HBTA) duties:

1. Facility walkdowns – 72 hours
2. Confined space briefings and testing – 20 hours
3. Industrial Hygiene testing to include lead, mercury, humidity/heat stress, noise level – 12 hours
4. Subcontractor briefings and job task reviews to include Fire/Hot Work Permits and Wide System Operation – 30 hours

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimate represents a full year through remediation of external areas.

#### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA			N/A
Manager/Senior Staff	HBB			N/A
Technical Advisors	HBTA	1 / year / 134		N/A
Project Manager/HP Manager	HBPM			N/A
Task Leader	HBTL			N/A
Battelle Technician	HBT			N/A
Battelle Technician O/T	HBTO			N/A
RAL Staff	HBL			N/A
Support Professional	HBP			N/A
Secretary/Clerical	HBS			N/A
Decon Ops Hourly	HBH			N/A
BCO Support	HBCO			N/A
BCO Skilled Laborer	HCE			N/A
BCO Skilled Laborer O/T	HCEO			N/A
BCO Facility Manager	HCF			N/A
Bartlett Technician	HRD			N/A
Bartlett Maint Specialist	HRDS			N/A
Bartlett Health Physics	HRH			N/A
Bartlett Admin Support	HRA			N/A

**Subcontract/Purchased Service:** No extraordinary items are anticipated.

**Special Equipment/Material:** No extraordinary items are anticipated.

**Comments/Explanations:**

**Basis of Estimate:**

**What is the estimator's experience?** Over 29 years experience in the industrial health and safety (IH&S) field ranging from safety engineer to safety and loss prevention manager. Joined Battelle in 1986 as the safety and training coordinator and was assigned as a principal research scientist, in risk management and process safety in 1990.

**What experience is directly related to BCLDP?** Total of almost 10 years in the BCLDP as a D&D Regulatory Compliance Coordinator with emphasis on IH&S and fire protection, an industrial health and safety specialist, and the BCLDP Safety Officer.

**Did we apply a complexity factor during our thought process?** Limited to the separation of daily; basic, regulatory and programmatic IH&S; and the WBS, WI, checklist and field support participation.

**Completed by:** Doug Winemiller

**Date:** 5/23/01

**Rev. No.:** 1

☒ FY 03 ☒ FY 04 ☒ FY 05

**WBS Number:** 784

**Activity Number:** 784 S

**Activity Title:** Radiation Protection

**Work Package Number:** 784-E03, 784-E04, 784-E05

**Work Package Title:** Radiation Protection Operations to completion of JN-1 decontamination and demolition.

**Work Package Description:** Perform administrative and oversight functions related to the BCLDP Radiation Protection Operations, including Health Physics Instrumentation and the BCLDP Respiratory Protection Program. These activities shall be performed in accordance with the provisions of NRC regulations, NRC license and other applicable requirements and guidance (e.g., DOL, DOE, State of Ohio).

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Monitor field activities to ensure that operations associated with the BCLDP radiation protection program are performed in accordance with regulatory standards in the protection of the workers, the public, and the environment.

#### **Applicable Requirements/Procedures:**

1. NRC regulations and guidance
2. NRC Radioactive Materials License (SNM-7)
3. Applicable State of Ohio regulations and DOE guidance
4. BCLDP Administrative/Operational Procedures

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Self-assessments/surveillances/programmatic audits of the Radiation Protection Program
2. Administrative oversight of the BCLDP Respiratory Protection Program
3. Review and approval of BCLDP Health Physics radiological survey data and associated documentation
4. Implementation of BCLDP operating procedure requirements, as needed
5. Administrative oversight of the BCLDP Health Physics Instrumentation Program
6. Day-to-day operation of the BCLDP Health Physics Instrumentation Program, including instrumentation performance testing, calibration, equipment maintenance and repair, review of documentation and document control, database updating and maintenance, material and equipment procurement, and maintenance of inventory.

#### **Assumptions:**

1. WJ-North site will maintain NRC License SNM-7 until completion of BCLDP.
2. Operational support (labor hours) directly related to a specific Work Instruction (e.g., RWPs) will be charged to that work package number.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work:** N/A

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year and will be constant over the life of the project.

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	N/A	N/A	N/A
Manager/Senior Staff	HBB	N/A	N/A	N/A
Technical Advisors	HBTA	N/A	N/A	N/A
Project Manager/HP Manager	HBPM	1 / yearly / 920	N/A	N/A
Task Leader	HBTL	N/A	N/A	N/A
Battelle Technician	HBT	N/A	N/A	N/A
Battelle Technician O/T	HBTO	N/A	N/A	N/A
RAL Staff	HBL	N/A	N/A	N/A
Support Professional	HBP	N/A	N/A	N/A
Secretary/Clerical	HBS	N/A	N/A	N/A
Decon Ops Hourly	HBH	1 / yearly/ 644	N/A	N/A
BCO Support	HBCO	N/A	N/A	N/A
BCO Skilled Laborer	HCE	N/A	N/A	N/A
BCO Skilled Laborer O/T	HCEO	N/A	N/A	N/A
BCO Facility Manager	HCF	N/A	N/A	N/A
Bartlett Technician	HRD	N/A	N/A	N/A
Bartlett Maint Specialist	HRDS	N/A	N/A	N/A
Bartlett Health Physics	HRH	1 / yearly / 920	N/A	N/A
Bartlett Admin Support	HRA	N/A	N/A	N/A

**Subcontract/Purchased Service:** \$31,130 yearly

**Special Equipment/Material:**

**Comments/Explanations:**

**Basis of Estimate:****What is the estimator's experience?**

I have been involved with Radiation Program Development, Implementation and Operations for 27 years at both DOE funded facilities and NRC licensed facilities

**What experience is directly related to BCLDP?**

Eight years of BCLDP experience managing the operations, implementation and development of the BCLDP Radiation Protection Program.

**Did we apply a complexity factor during our thought process?**

WJ-North site will maintain NRC license SNM-7 until completion of BCLDP. This requires a minimum staff of 0.5 HBPM, 1 HRH, and 0.35 HBH, until JN-1 demolition is completed.

**Completed by:** J.Hallgren

**Date:** 5/18/2001

**Rev. No.:** 0



Labor Code	% time	# hours	# days/week	Comments
HBPM	0.31	571	5	RFOM / RPP Administrator, HP Project Manager
HBPM	0.09	166	5	HP Project Manager
HBPM	0.1	184	5	Instrumentation Support
<b>Total Hours:</b>				
HBH	0.35	644	5	Tech Support/Spec Projects
<b>Total Hours:</b>				
HRH	0.5	920	5	Instrumentation Technician

**WBS 784 Radiation Protection**

Activity	# FTE	Labor Category
Calibration	0.35	HRH
Repair	0.12	
Inventory	0.01	
Document control	0.02	
Total A HRH	0.50	
Instrumentation program development and maintenance	0.35	HBH
Total A HBH	0.35	
Inventory	0.01	HBPM
Procurement/Off-site repair and calibration arrangements	0.02	
Document control	0.02	
Database maintenance	0.01	
Total A HBPM	0.06	
Radiation protection program development and maintenance	0.04	HBPM
HP Tech indoctrination/site specifics training	0.01	
HP Tech scheduling (w/ Bartlett Site Coordinator)	0.01	
Administration of BCLDP Respiratory Protection Program	0.01	
Total B HBPM	0.07	
Radiation protection program development and maintenance	0.05	HBPM
HP Tech indoctrination/site specifics training	0.01	
HP Tech scheduling (w/ Bartlett Site Coordinator)	0.01	
Total C HBPM	0.07	
Total HBPM	0.20	
Total HBH	0.35	
Total HRH	0.50	

☒ **FY 06 After Building Demo until Externals completed**

**WBS Number:** 784

**Activity Number:** 784 T

**Activity Title:** Radiation Protection

**Work Package Number:** 784-E06

**Work Package Title:** Radiation Protection Operations after completion of JN-1 demolition to end of BCLDP

**Work Package Description:** Perform administrative and oversight functions related to the BCLDP Radiation Protection Operations, including Health Physics Instrumentation and the BCLDP Respiratory Protection Program. These activities shall be performed in accordance with the provisions of NRC regulations, NRC license and other applicable requirements and guidance (e.g., DOL, DOE, State of Ohio).

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Monitor field activities to ensure that operations associated with the BCLDP radiation protection program are performed in accordance with regulatory standards in the protection of the workers, the public, and the environment.

#### **Applicable Requirements/Procedures:**

1. NRC regulations and guidance
2. NRC Radioactive Materials License (SNM-7)
3. Applicable State of Ohio regulations and DOE guidance
4. BCLDP Administrative/Operational Procedures

#### **Input Descriptions:**

1. N/A

#### **Output Descriptions:**

1. Self-assessments/surveillances/programmatic audits of the Radiation Protection Program
2. Administrative oversight of the BCLDP Respiratory Protection Program
3. Review and approval of BCLDP Health Physics radiological survey data and associated documentation
4. Implementation of BCLDP operating procedure requirements, as needed
5. Administrative oversight of the BCLDP Health Physics Instrumentation Program
6. Day-to-day operation of the BCLDP Health Physics Instrumentation Program, including instrumentation performance testing, calibration, equipment maintenance and repair, review of documentation and document control, database updating and maintenance, material and equipment procurement, and maintenance of inventory.

#### **Assumptions:**

1. WJ-North site will maintain NRC License SNM-7 until completion of BCLDP.
2. Operational support (labor hours) directly related to a specific Work Instruction (e.g., RWPs) will be charged to that work package number.
3. JN-1 Decontamination and Demolition has been completed.

**Estimated Time to Plan the Work (Including Review and Approval):** N/A

**Estimated Resources Required to Plan the Work: N/A**

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Estimated Time to Perform the Task:** Estimates represent a full year and will be constant over the life of the project.

**Estimated Resources Required to Perform the Work**

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	N/A	N/A	N/A
Manager/Senior Staff	HBB	N/A	N/A	N/A
Technical Advisors	HBTA	N/A	N/A	N/A
Project Manager/HP Manager	HBPM	1 / yearly / 368	N/A	N/A
Task Leader	HBTL	N/A	N/A	N/A
Battelle Technician	HBT	N/A	N/A	N/A
Battelle Technician O/T	HBTO	N/A	N/A	N/A
RAL Staff	HBL	N/A	N/A	N/A
Support Professional	HBP	N/A	N/A	N/A
Secretary/Clerical	HBS	N/A	N/A	N/A
Decon Ops Hourly	HBH	1 / yearly/ 184	N/A	N/A
BCO Support	HBCO	N/A	N/A	N/A
BCO Skilled Laborer	HCE	N/A	N/A	N/A
BCO Skilled Laborer O/T	HCEO	N/A	N/A	N/A
BCO Facility Manager	HCF	N/A	N/A	N/A
Bartlett Technician	HRD	N/A	N/A	N/A
Bartlett Maint Specialist	HRDS	N/A	N/A	N/A
Bartlett Health Physics	HRH	1 / yearly / 368	N/A	N/A
Bartlett Admin Support	HRA	N/A	N/A	N/A

**Subcontract/Purchased Service:** Repair/Calibration, ½ Previous Year's (\$15,000.00 year)

**Special Equipment/Material:** -

**Comments/Explanations:**

**Basis of Estimate:****What is the estimator's experience?**

I have been involved with Radiation Program Development, Implementation and Operations for 27 years at both DOE funded facilities and NRC licensed facilities

**What experience is directly related to BCLDP?**

Eight years of BCLDP experience managing the operations, implementation and development of the BCLDP Radiation Protection Program.

**Did we apply a complexity factor during our thought process?**

After completion of JN-1 demolition to end of BCLDP will require a minimum staff of 0.2 HBPM, 0.2 HRH, and 0.1 HBH. All output descriptions (See Page 1) remain valid to end of BCLDP.

**Completed by:** J.Hallgren

**Date:** 5/18/2001

**Rev. No.:** 0

Labor Code	% time	# hours	# days/week	Comments
HBPM	0.2	368	5	RFOM / RPP Administrator, HP Project Manager
HBPM	0.05	92	5	HP Project Manager
HBPM	0.05	92	5	Instrumentation Support
<b>Total Hours:</b>				
HBH	0.1	184	5	Tech Support/Spec Projects
<b>Total Hours:</b>				
HRH	0.5	950	5	Instrumentation Technician

#### WBS 784 Radiation Protection

Activity	# FTE	Labor Category
Calibration	0.12	HRH
Repair	0.05	
Inventory	0.01	
Document control	0.02	
Total A HRH	0.20	
Instrumentation program development and maintenance	0.10	HBH
Total A HBH	0.10	
Inventory	0.01	HBPM
Procurement/Off-site repair and calibration arrangements	0.02	
Document control	0.01	
Database maintenance	0.01	
Total A HBPM	0.05	
Radiation protection program development and maintenance	0.07	HBPM
HP Tech indoctrination/site specifics training	0.01	
HP Tech scheduling (w/ Bartlett Site Coordinator)	0.01	
Administration of BCLDP Respiratory Protection Program	0.01	
Total B HBPM	0.10	
Radiation protection program development and maintenance	0.03	HBPM
HP Tech indoctrination/site specifics training	0.01	
HP Tech scheduling (w/ Bartlett Site Coordinator)	0.01	
Total C HBPM	0.05	
Total HBPM	0.20	
Total HBH	0.10	
Total HRH	0.20	

☒ FY 03 ☒ FY 04 ☒ FY 05 ☒ FY 06

**WBS Number:** 787

**WBS Title:** Laundry/Respirator Support

**Work Package Number:** 787-B03, -B04, -B05, -B06

**Work Package Title:** Laundry/Respirator Support

**Work Package Description:** This work package incorporates the administration and implementation of the functions associated with the Respiratory Protection/PPE organization that have not been identified as direct work activities. These functions are performed in accordance with applicable governmental regulations. General functions include program administration, document control, Respirator Fit-testing program, Surveillance and Maintenance program for BCLDP equipment, Preparation and receipt of PPE/Respirator shipments to approved vendor, Programmatic review and self-assessment, and Inventories of programmatic equipment.

### **Basis of Estimate**

**Strategy for Accomplishing Task:** Performance of listed functions by individuals qualified and/or certified in accordance with BCLDP operating procedures.

#### **Applicable Requirements/Procedures:**

1. Current Revisions of RS-Procedures, HP-AP-9.0, HP-AP-19.0, HP-OP-013, HP-OP-027, HP-OP-024, TR-OP-004, WA-OP-020, HS-AP-05.0, HS-OP-001, SM-AP-1.0, MA-AP-20.2, PR-AP-17.1, QD-AP-05.1, QD-AP-05.2, QD-AP-18.1,

#### **Input Descriptions:**

N/A

#### **Output Descriptions:**

1. Completed Work Instructions
2. Completion of established FY milestones
3. Completion of scheduled S&M activities with minimal impact upon D&D operations
4. Maintenance of system equipment in accordance with manufacturer/vendor requirements and safe work practices
5. Adherence to established procedural requirements
6. Promotion of safe work practices and assurance of regulatory compliance

#### **Assumptions:**

1. The following trigger points have been considered for this report: (1) To completion of JN-1 decontamination; (2) To completion of JN-1 demolition; (3) Complete remediation of JN site grounds; (4) To completion of JN-2 decontamination; (5) To completion of JN-2 demolition; (6) To completion of JN-3 decontamination; (7) To completion of JN-3 demolition.
2. Order of completion of listed trigger points not ascertained. FY02 staffing levels required for WBS 787 until completion of JN-1 decontamination (To end of FY04) or the determination that BAS support is no longer required. After JN-1 decontamination is completed, it is assumed that staffing levels can be reduced as indicated in "Trigger Points/Staffing Levels" section of this Basis of Estimate.
3. Breathing Air Support will not be required upon cessation of JN-1 decontamination activities
4. Respiratory Protection support (except for Breathing Air Support) and Protective Clothing support will be required to support decontamination of JN-2 and JN-3.

5. Modified Protective Clothing support will be required until completion of JN-1 / JN-2 / JN-3 demolition and JN site ground remediation.
6. Dose equalization and associated rotation of trained RP/PC staff will be unnecessary after JN-1 decontamination has been completed or source term is removed.
7. HBPM will supplement the contract labor force, as required, for support activities throughout JN-2/-3 decontamination and JN-1/JN-2/JN-3 demolition.
8. Currently assigned personnel are retained and re-training/qualification of BAS operators is not required. Add 120 to 160 HRD hours for training/qualification of new hires.
9. Although the BAS Compressor unit remains serviceable and has been maintained in accordance with the manufacturer specifications, it is reasonable to assume that, due to the age and running hours of the unit, the BAS Compressor may require significant maintenance prior to the cessation of JN-1 decontamination activities. Please be advised that any significant downtime could adversely affect the production schedule of JN-1 decontamination in addition to the costs of repair. According to the service vendor, replacement of compressing elements (the worst case scenario) would be approximately \$35,000.00. Although the requirement for this scope of service is highly unlikely, due to the historical maintenance of the unit, it may be worthwhile at this planning stage to consider contingencies to minimize the associated downtime for any unscheduled BAS major maintenance. Alternatives include the replacement of an out-of-service compressor with a leased unit or the purchase of a comparable unit. Estimated lease costs would approach \$4,000.00 monthly, if equipment is available; estimated purchase of a comparable unit would be \$70,000.00 to \$80,000.00.

**Estimated Time to Plan the Work (Including Review and Approval): N/A**

#### **Estimated Resources Required to Plan the Work**

#### **WBS 787, Laundry/Respirator Support Specified Functions, Time Estimation and Anticipated Personnel Requirements**

##### **Program Administration:**

1. Make work assignments and supervise work efforts for 3 or 4 program technicians.  
HBPM 2 Hr/wk 100 Hrs/yr
2. Coordinate technician rotation/assignment with Decontamination Supervisor(s) for purposes of dose equalization and/or budgetary constraints.  
HBPM 0.25 Hr/wk 12.5 Hrs/yr
3. Oversee Breathing Air System operations-coordinate with Project Managers, Task Leaders and Decontamination Supervisors to establish support.  
HBPM 1.5Hr/wk 75 Hrs/yr
4. Prepare reports: status, event or special projects, as necessary.  
HBPM 1.5 Hr/wk 75 Hrs/yr
5. Review of generated programmatic documentation for content, applicability and quality assurance.  
HBPM 2 Hr/wk 100 Hrs/yr
6. Quarterly Regulatory Compliance literature review.  
HBPM 4 Hr/qtr 12 Hrs/yr
7. Prepare all program-related procurement for review by PAC and BCO Purchasing. Review and authorize invoicing for payment. Coordinate and receive incoming orders.  
HBPM 2 Hr/wk 100 Hrs/yr
8. Administer Protective Clothing sub-contract with designated vendor. Coordinate shipments, invoicing, payment, special services, sub-contract modifications, etc.  
HBPM 4 Hr/mth 48 Hrs/yr
9. Coordinate with off-site vendors for scheduled/unscheduled maintenance or repair of the Breathing Air System or other programmatic equipment.

- 10. Generate Work Instruction(s) and associated documents for S&M or other tasks.  
HBPM 1 Hr/mth 12 Hrs/yr
- 11. Review programmatic time charging.  
HBPM 2 Hrs/mth 24 Hrs/yr
- 12. Revision of programmatic documents, i.e., operating procedures.  
HBPM .5 Hr/wk 25 Hrs/yr
- 13. Training/procedure qualification/indoctrination for newly assigned BAS operators/RP/PPC technicians.  
HBPM Estimated 40 Hrs/yr
- 14. Planning/Task Coordination/Safety Meetings  
HBPM Estimated 20 Hrs/yr
- 14. Planning/Task Coordination/Safety Meetings  
HBPM Estimated 217 Hrs/yr

**Document Control:**

- 1. Preparation of Document Control package (300+ pages) and submission to Project Records on a monthly basis.  
HBPM 6 Hrs/mth 72 Hrs/yr
- 2. Update Programmatic historical and personnel files.  
HBPM 2 Hrs/mth 24 Hrs/yr

**Respirator Fit-testing Program:**

- 1. Perform approximately 110 Quantitative Respirator Fit-tests annually for BCLDP personnel.  
HBPM (@.75 Hr/Fit-test) 82.5 Hrs/yr
- 2. Solicit and collect current data on BCLDP personnel to assure respirator qualification, e.g. medical authorization, respirator training.  
HBPM 0.5 Hr/mth 6 Hrs/yr
- 3. Generate and maintain all records of fit-testing.  
N/A-See Item #1
- 4. Update Qualified Respirator User database. Generate reports for applicable personnel.  
HBPM 0.5 Hr/wk 25 Hrs/yr
- 5. Maintain S&M schedule for fit-testing equipment.  
HBPM Estimated 4 Hrs/yr

**Surveillance and Maintenance Program for BCLDP Equipment:**

- 1. Maintain all related databases (calibration, instrument recall, inventory and maintenance) and associated documentation  
HBPM 0.5 Hr/wk 25 Hrs/yr
- 2. Schedule and coordinate repair of faulty communication equipment  
HBPM 0.25 Hr/wk 12.5 Hrs/yr  
HRD 1 Hr/wk 52 Hrs/yr
- 3. Assure an adequate inventory of airlines for future work by inspecting and sleeving airlines.  
HRD (Task Leader) 1 Hr/mth 12 Hrs/yr  
HRD Estimated 5 Hrs/mth 60 Hrs/yr
- 4. Completion of all applicable S&M "tickler" documentation.  
HRD (Task Leader) 1 Hr/mth 12 Hrs/yr  
HRD 1 Hr/mth 12 Hrs/yr
- 5. Perform monthly detail inspection of Self-Contained Breathing Apparatus (SCBA) and document.  
HRD 6 Hrs/monthly 72 Hrs/yr
- 6. Perform annual flow-checking of SCBA units using calibrated Portable Test Console.  
HRD Estimated 12 Hrs/yr



7. Hydrostatic testing of SCBA and other breathing air high pressure cylinders.  
HBPM 4 Hrs/yr  
HRD 12 Hrs/yr
8. Calibrate Breathing Air System electronic Carbon Monoxide (CO) Monitor monthly.  
HRD (Task Leader) 0.5 Hr/mth 6 Hrs/yr  
HRD 1 Hr/mth 12 Hrs/yr
9. Inspect BAS Warning/Cautions signs monthly.  
HRD (Task Leader) 0.25 Hr/mth 3 Hrs/yr  
HRD .5 Hr/mth 6 Hrs/yr
10. Inspect BAS Wall Hangers and Hoses for safe and proper routing; walls hangers properly positioned; secured hose couplings/fittings monthly.  
HRD (Task Leader) 0.25 Hr/mth 3 Hrs/yr  
HRD .5 Hr/mth 6 Hrs/yr
11. Inspect BAS electrical connections, alarm systems, boxes, connectors and cables monthly.  
HRD (Task Leader) 0.25 Hr/mth 3 Hrs/yr  
HRD .5 Hr/mth 6 Hrs/yr
12. Inspect BCLDP emergency equipment monthly.  
HRD (Task Leader) 0.25 Hr/mth 3 Hrs/yr  
HRD .5 Hr/mth 6 Hrs/yr
13. Perform a PAPR unit battery draindown/recharge monthly.  
HRD 2 Hrs/wk 104 Hrs/yr
14. Monthly, inspect respirator storage cabinets to verify that respirators are organized, stored and rotated correctly.  
HRD (Task Leader) 0.25 Hr/mth 3 Hrs/yr
15. Schedule and perform radiological air sampling on a quarterly basis.  
HBPM .25 Hr/qtr 1 Hr/yr  
HRH 1.5 Hrs/qtr 6 Hrs/yr  
HBL 4 Hrs/qtr 16 Hrs/yr
16. Quarterly, collect and submit samples for BAS air certification testing/analysis by an independent vendor.  
HBPM 0.5 Hr/qtr 2 Hrs/yr  
HRD (Task Leader) 1.5/qtr 6 Hrs/yr
17. Schedule and perform vendor compressor maintenance on a quarterly basis.  
HBPM 1 Hr/qtr 4 Hrs/yr  
HRH 2 Hr/qtr 8 Hrs/yr  
HRD 6 Hr/qtr 12 Hrs/yr  
HCE (BCLDP Electrician) Estimated 12 Hrs/yr
18. Perform (remove, transport, calibrate, install, test) annual calibration of BAS components, e.g. gauges, switches, PRVs, manifolds, flowmeters, etc.  
HBPM Estimated 12 Hrs/yr  
HRD Estimated 18 Hrs/yr  
HCE (KA ISL) Estimated 40 Hrs/yr  
HCE (BCLDP Electrician) Estimated 18 Hrs/yr  
HRH Estimated 6 Hrs/yr
19. Perform annual calibration of Survivair Portable Test Console  
HBPM Estimated 3 Hrs/yr
20. Perform annual calibration of Portacount Plus Fit-test Machine(s)  
HBPM Estimated 6 Hrs/yr
21. Perform annual calibration of PAPR test equipment  
HBPM Estimated 3 Hrs/yr

22. Perform a semi-annual inspection and maintenance of the BAS pre-filter, BAS Egress filter, BAS final filter and BAS desiccant.

HBPM 4 Hrs/yr  
HRD (Task Leader) 4 Hrs/yr  
HRD 16 Hrs/yr

**Preparation and receipt of PPE/Respirator shipments to approved vendor**

1. Radiological survey of used respiratory protection equipment/used protective clothing

HBPM 4 Hrs/yr  
HRD 64 Hrs/yr  
HRH 32 Hrs/yr

2. Review of Radiological survey

HBPM 4 Hrs/yr

3. Receipt of PPE/Respirator shipment

HBPM 36 Hrs/yr  
HRD 72 Hrs/yr  
HRH 36 Hrs/yr

**Programmatic Review and Self-Assessment:**

1. Develop, conduct and document the Annual Respiratory Protection Program Review in accordance with the provisions of RS-AP-1.0.

HBPM 8 Hrs/yr  
HRD (Task Leader) 16 Hrs/yr  
HRD 4 Hrs/yr  
HBS 4 Hrs/yr

2. Develop, conduct and document the Annual Protective Clothing Program Review in accordance with the provisions of HP-AP-19.0.

HBPM 8 Hrs/yr  
HRD (Task Leader) 16 Hrs/yr  
HRD 4 Hrs/yr  
HBS 4 Hrs/yr

**Inventories of Programmatic Equipment:**

1. Perform an annual inventory of BCLDP-owned Anti-contamination/Work clothing for the Government Properties Office/PAC.

HBPM 8 Hrs/yr  
HRD (Task Leader) 4 Hrs/yr  
HRD 32 Hrs/yr

2. Perform an annual inventory of BCLDP-owned respiratory protection equipment

HBPM 8 Hrs/yr  
HRD (Task Leader) 4 Hrs/yr  
HRD 16 Hrs/yr

3. Perform shipment verification inventories on incoming laundry shipments periodically to verify vendor invoicing quantities.

HBPM Estimated 4 Hrs/yr  
HRD (Task Leader) 1 Hr/qtr 4 Hrs/yr  
HRD 4 Hrs/qtr 16 Hrs/yr

4. Perform a monthly sight/walkdown inventory to verify appropriate quantities on-site to support anticipated work. Items of concern include: Bubble hood respirators, Disposable protective clothing, Air line hoses and sleeving, Respirator processing supplies, Office supplies, Protective clothing supplies, Respirator repair spare parts, BAS fuses, filters, calibration gases, etc., Respirator filter cartridges, Communication Equipment (Parts, Repair), etc.

HRD (Task Leader) 2 Hrs/mth 24 Hrs/yr

Labor Type	Code	Persons/Days/Hours
Manager/Senior Staff	HBB	N/A
Technical Advisors	HBTA	N/A
Project Manager/HP Manager	HBPM	N/A
Task Leader	HBTL	N/A
Secretary/Clerical	HBS	N/A
Support Professional	HBP	N/A
Bartlett Health Physics	HRH	N/A

**Trigger Points/Staffing Levels:**

**PER CURRENT BASELINE FOR FY02 to FY04**

1. To completion of JN-1 decontamination
2. To completion of JN-2 decontamination
3. To completion of JN-2 demolition
4. To completion of JN-3 decontamination
5. To completion of JN-3 demolition

- |   |   |
|---|---|
| (1) Program Administration:                     | All listed activities maintain FY02 staffing level. |
| (2) Document Control:                           | All listed activities; maintain FY02 staffing level |
| (3) Respirator Fit-testing Program:             | All listed activities; maintain FY02 staffing level |
| (4) Surveillance and Maintenance                | All listed activities; maintain FY02 staffing level |
| (5) Preparation and Receipt of PPE/Respirator.. | All listed activities; maintain FY02 staffing level |
| (6) Programmatic Review                         | All listed activities; maintain FY02 staffing level |
| (7) Inventories of Equipment                    | All listed activities; maintain FY02 staffing level |

**PER CURRENT BASELINE FOR FY05 TO FY06**

1. To completion of JN-1 demolition, including sub-contractor support activities
2. Remediation of JN site grounds

Estimated Staffing levels (delete 1 HRD, delete all HBL, delete all HCE from FY02 staffing levels)

**DELETE ASSOCIATED HOURS AS INDICATED: ALL LABOR CATEGORIES**

- |   |  |
|---|--|
| (1) Program Administration:                   | All listed activities except #2, #3, #9,   |
| (2) Document Control:                         | All listed activities;   |
| (3) Respirator Fit-testing Program:           | All listed activities; modified per scope of work and staffing levels              |
| (4) Surveillance and Maintenance              | All listed activities except #3, #5, #8, #9, #10, #11, #15, #16, #17, #18 and #22; |
| (5) Preparation and Receipt of PPE/Respirator | All listed activities;   |
| (6) Programmatic Review                       | All listed activities;   |
| (7) Inventories of Equipment                  | All listed activities; modified per scope of work                                  |

**Estimated Time to Perform the Task:** Estimates represent a full year and are constant over the life of the project.

### Estimated Resources Required to Perform the Work

*In the following table, for each appropriate labor type enter the # of Persons working on the activity, the # of Days (full or partial) they are involved, and the total # of Hours necessary to actually perform the work; e.g., 4/20/640*

Labor Type	Code	Persons/Days/Hours	PPE/Laundry Group	Total Jumps
Program Manager	HBA	N/A	N/A	N/A
Manager/Senior Staff	HBB	N/A	N/A	N/A
Technical Advisors	HBTA	N/A	N/A	N/A
Project Manager/HP Manager	HBPM	1 / year / 1231	N/A	N/A
Task Leader	HBTL	N/A	N/A	N/A
Battelle Technician	HBT	N/A	N/A	N/A
Battelle Technician O/T	HBTO	N/A	N/A	N/A
RAL Staff	HL	1/ year / 16	N/A	N/A
Support Professional	HBP	N/A	N/A	N/A
Secretary/Clerical	HBS	1 / year / 8	N/A	N/A
Decon Ops Hourly	HBH	N/A	N/A	N/A
BCO Support	HBCO	N/A	N/A	N/A
BCO Skilled Laborer	HCE	2 / year / 70	N/A	N/A
BCO Skilled Laborer O/T	HCEO	N/A	N/A	N/A
BCO Facility Manager	HCF	N/A	N/A	N/A
Bartlett Technician	HRD	2/ year / 614	N/A	N/A
Bartlett Maint Specialist	HRDS	1 / year / 123	N/A	N/A
Bartlett Health Physics	HRH	1 / year / 88	N/A	N/A
Bartlett Admin Support	HRA	N/A	N/A	N/A

**Subcontract/Purchased Service:** No extraordinary items are anticipated.

**Special Equipment/Material:** See Assumption #9.

**Comments/Explanations:**

1. For FY02, some work tasks are no longer applicable as some BCLDP operations have been outsourced. These tasks have been deleted from the specified work functions and the "Estimated Resources Table" has been revised accordingly.
2. An additional category to describe work requirements has been implemented, "Preparation and receipt of PPE/Respirator shipments to approved vendor", as the result of operation outsourcing. "Estimated Resources Table" has been revised accordingly.
3. See Assumptions and following Data Template for other comments/explanations.

**Basis of Estimate:****What is the estimator's experience?**

Approximately 12 years in the Nuclear Power Industry, 10+ years with BCLDP operations

**What experience is directly related to BCLDP?**

9+ years of direct BCLDP supervisory experience in Respiratory Protection/Protective Clothing Operations (5 years at KA, 4+ years at WJ)

**Did we apply a complexity factor during our thought process?**

It is assumed that BCLDP work scope, after JN-1 decontamination is completed, will require support services at levels similar to that of the remediation tasks performed in JN-3 in FY02.

Completed by: G.Sapp

Date: 6/17/2002

Rev. No.:3